

# SEASONALLY ADJUSTED INDICATORS

1967



COMMONWEALTH BUREAU OF CENSUS AND STATISTICS  
CANBERRA, AUSTRALIA





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REASONABLE DULY

1957-1958

1957-1958

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## SEASONALLY ADJUSTED INDICATORS

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### Preface

This bulletin presents in seasonally adjusted form forty-eight selected series of statistical indicators of Australian economic activity. The seasonal adjustment of these series is intended to serve as an aid in statistical interpretation and analysis.

Later figures in these series, and other series to be seasonally adjusted, will be published in existing monthly and quarterly publications of this Bureau. The purposes of the present bulletin are to provide figures for the past ten years or so, for the sake of historical perspective, and to give a detailed description of the methods used.

As is well known, seasonal adjustment may be carried out by means of any one of a number of recognised procedures. Each of these can be expected to yield results differing in greater or lesser degree from those of other methods. In interpreting particular seasonally adjusted statistics it is necessary therefore to bear in mind the methods by which they have been derived and the limitations to which the methods used are subject. The explanation given in the following pages of the seasonal adjustment methods used by this Bureau is intended to serve these purposes.

The seasonally adjusted series published in this volume have been calculated by means of the Commonwealth Bureau of Census and Statistics Control Data Corporation 3600 Electronic Computer. Without access to powerful electronic computing equipment and expert programming services, it would not have been possible to carry out the elaborate seasonal analyses upon which these results are based.

The basic computer programs employed are those of the U.S. Census Bureau Method II, X-11 Variant, and were supplied along with the essential operating instructions and technical papers by Dr. A. Ross Eckler, the Director of the United States Bureau of the Census whose generous assistance is gratefully acknowledged.

The computer programs as originally supplied have been amended in some minor respects and extended in various ways in order to adapt them to this Bureau's computer configuration and to meet particular operational requirements. By these means it has been possible to systematise the extensive and intricate analyses which are needed in order to specify the particular variation of the seasonal adjustment method to be used for each series, and to assess the results obtained. It has also been possible to present in this bulletin numerical data and graphs as automatic computer print-out for subsequent printing by a photo-reduction process.

The accompanying graphs have been produced by means of the Calcomp Digital Plotter installed in the Commonwealth Scientific and Industrial Research Organisation Computer Centre in Canberra. Special acknowledgement is made of the assistance given by the Director (Dr G.N. Lance) and his staff.

As will be evident, the production of this bulletin has required considerable effort on the part of many highly trained and experienced members of my staff. Whilst it is not possible to mention all, special acknowledgement is made to Dr F.B. Horner and Mr E.K. Foreman, who directed the work and to Messrs K.R.W. Brewer and A.W. Roche and their staff who were largely responsible for the research connected with the project and the production of this bulletin. Further acknowledgement is made to Mr H.F. Brophy and his staff who were responsible for computer programming.

K. M. ARCHER  
COMMONWEALTH STATISTICIAN

COMMONWEALTH BUREAU OF CENSUS AND STATISTICS

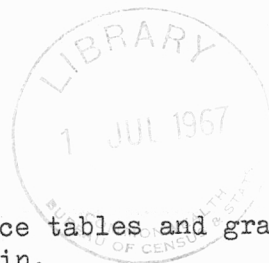
CANBERRA, A.C.T.

JULY 1967

# SEASONALLY ADJUSTED INDICATORS

1967

## ADDITIONAL DATA



The following figures have become available since tables and graphs of these particular series were prepared for this bulletin.

Page	Series		Original	Seasonally Adjusted
	<u>Wage and Salary Earners in Civilian Employment</u>			
2	Males ('000)	April 1967	r 2,635.6	2,625.9
		May 1967	p 2,640.6	p 2,633.5
3	Females ('000)	May 1967	p 1,139.9	p 1,140.0
4	Persons ('000)	April 1967	r 3,775.0	3,762.6
		May 1967	p 3,780.5	p 3,773.3
5	Private - Persons ('000)	April 1967	r 2,806.1	2,798.8
		May 1967	p 2,809.4	p 2,806.9
6	Government - Persons ('000)	May 1967	p 971.1	966.0
7	Manufacturing - Persons ('000)	April 1967	r 1,275.8	r 1,270.5
		May 1967	p 1,274.7	p 1,274.4
8	Commerce - Persons ('000)	May 1967	p 649.3	p 650.0
	<u>Number Receiving Unemployment Benefit</u>			
9	Males	June 1967	15,833	15,239
0	Females	June 1967	7,561	6,899
1	Persons	June 1967	23,394	22,091
	<u>New Motor Vehicles Registered</u>			
4	Cars and Station Wagons	May 1967	r 29,144	r 27,520
		June 1967	p 27,396	p 28,070
5	Vehicles other than Cars and Station Wagons	May 1967	r 7,547	r 6,603
		June 1967	p 6,725	p 6,273
6	Total	May 1967	r 36,691	r 33,661
		June 1967	p 34,121	p 34,431

ADDITIONAL DATA - continued

Page	Series	Original	Seasonal Adjust
	<u>Buildings Commenced</u>		
39	New Houses and Flats Commenced - Number Quarter Ended March 1967	r 28,299	r 29,0
40	New Buildings, other than New Houses and Flats, Commenced - Value (\$ million) Quarter Ended March 1967	216.7	21
41	Total New Buildings Commenced - Value (\$ million) Quarter Ended March 1967	447.6	45
	<u>Major Trading Banks</u>		
46	Total Deposits (\$ million) June 1967	5,264.8	5,350
47	Loans, Advances and Bills Discounted (\$ million) May 1967	r 3,136.7	r 3,09
	June 1967	3,180.9	3,11
	<u>Instalment Credit for Retail Sales</u>		
48	Non-retail Finance Businesses - Balances Outstanding (\$ million) May 1967	rp 1,096.8	1,10
	June 1967	p 1,104.0	1,11

r - revised

p - preliminary, subject to revision.



# SEASONALLY ADJUSTED INDICATORS

1967

## CONTENTS

	<u>Page</u>
List of data	vi
Interpretation of seasonally adjusted statistics	viii
Introductory notes	
Introduction	ix
Basic processes of seasonal adjustment, illustrated by simple methods	x
Limitations of simple seasonal adjustment methods, and techniques for overcoming them	xviii
The seasonal adjustment methods employed in the Bureau of Census and Statistics	xxi
Limitations of seasonally adjusted statistics	xxxv
Presentation of seasonally adjusted statistics	xxxvi
Data and graphs	1
Appendix A - Explanatory notes and publications for further reference	49
Appendix B - Program options employed	54
Appendix C - Measures of variability	58

NOTE: All figures relate to Australia as a whole unless otherwise stated.



LIST OF DATAPagePRODUCTION

Electricity Production	1
Gas Production	2
Cement Production	3
Electric Motors under one H.P. Production	4
Cotton Woven Cloth Production (excluding Towels and Towelling)	5
Woollen and Worsted Woven Cloth Production (excluding Blanketing)	6
Boots and Shoes Production	7
Meat Production	8
Whole Milk Production, all Purposes	9

OVERSEAS TRADE

Imports	10
Exports	11

EMPLOYMENT

Wage and Salary Earners in Civilian Employment - Males	12
Wage and Salary Earners in Civilian Employment - Females	13
Wage and Salary Earners in Civilian Employment - Persons	14
Wage and Salary Earners in Civilian Employment - Private - Persons	15
Wage and Salary Earners in Civilian Employment - Government - Persons	16
Wage and Salary Earners in Civilian Employment - Manufacturing - Persons	17
Wage and Salary Earners in Civilian Employment - Commerce - Persons	18
Number Receiving Unemployment Benefit - Males	19
Number Receiving Unemployment Benefit - Females	20
Number Receiving Unemployment Benefit - Persons	21
Number Registered for Employment with Commonwealth Employment Service - Males	22
Number Registered for Employment with Commonwealth Employment Service - Females	23
Number Registered for Employment with Commonwealth Employment Service - Persons	24
Job Vacancies Registered with Commonwealth Employment Service - for Males	25
Job Vacancies Registered with Commonwealth Employment Service - for Females	26
Job Vacancies Registered with Commonwealth Employment Service - Total	27

INTERNAL TRADE

Monthly Retail Sales - All Items (excluding Motor Vehicles, Parts, Petrol, etc.)	28
Quarterly Retail Sales - Food and Drink	29
Quarterly Retail Sales - Clothing, Hardware, Electrical and Furniture	30
Quarterly Retail Sales - All Other Goods (excluding Motor Vehicles, Parts, Petrol, etc.)	31
Quarterly Retail Sales - All Items (excluding Motor Vehicles, Parts, Petrol, etc.)	32

	<u>Page</u>
Quarterly Retail Sales - Motor Vehicles, Parts, Petrol, etc.	33
New Motor Vehicles Registered - Cars and Station Wagons	34
New Motor Vehicles Registered - Vehicles other than Cars and Station Wagons	35
New Motor Vehicles Registered - Total	36
 <u>BUILDING, ETC.</u>	
New Houses and Flats Approved - Number	37
Total Buildings Approved - Value	38
New Houses and Flats Commenced - Number	39
New Buildings, other than New Houses and Flats, Commenced - Value	40
Total New Buildings Commenced - Value	41
Capital Expenditure by Private Businesses - New Buildings and Structures	42
Capital Expenditure by Private Businesses - Other New Capital Equipment	43
Capital Expenditure by Private Businesses - Total New Capital Expenditure	44
 <u>FINANCE</u>	
Savings Bank Deposits	45
Major Trading Banks - Total Deposits	46
Major Trading Banks - Loans, Advances and Bills Discounted	47
Instalment Credit for Retail Sales : Non-retail Finance Businesses - Balances Outstanding.	48

### INTERPRETATION OF SEASONALLY ADJUSTED STATISTICS

Users of seasonally adjusted statistics should bear the following points in mind.

1. Seasonal adjustment is a means of removing the effect of the estimated normal seasonal variation from statistical series.
2. It does not remove the effect of other influences from the statistics; in particular it does not remove any unusual irregular movement which may be present in any particular month or quarter. Therefore an unexpected upward or downward movement in a seasonally adjusted series does not necessarily denote a change of trend.
3. Among the irregular movements (i.e. those not removed by seasonal adjustment) would be movements due to any abnormal "seasonal" effect: e.g. the effect of the fruit-picking season starting early or late in a particular year. This effect would remain in the adjusted figures.
4. As well as being adjusted for seasonal variation, some of the statistical series included in this bulletin have been adjusted for the effects of some calendar irregularities, namely: "trading-day" effects (e.g. having four or five Fridays in a particular month); and the effects of moveable holidays, i.e. Easter and Australia Day. These adjustments have been made where warranted by prior analyses. Since these adjustments materially affect the results, users should particularly note whether or not these calendar adjustments have been made to particular series. This is indicated in Appendix B.
5. The methods of seasonal adjustment used in this bulletin allow for gradual changes in the seasonal pattern, so that current figures are adjusted in accordance with the estimated normal seasonal pattern of the recent past.
6. However, the methods used may not give an adequate adjustment if there should be an abrupt change of seasonal pattern in any series in the future.
7. The methods have required judgment to be used in the choice of certain specifications - though once the specifications have been chosen, the adjustment of the statistics proceeds each month without subjective judgment having to be used. For this reason the adjusted series are always in a sense estimates, and are not definitive statistics in the same sense as the original statistics are.
8. It can be expected that seasonally adjusted statistics will be revised as additional years are brought into the analysis.
9. For these reasons, therefore, it would be neither reasonable nor prudent to regard seasonally adjusted series as in any way "definitive". They must be treated with caution as being no more than useful indicators of movements. They can without doubt be a useful aid to critical interpretation, but can in no way be a substitute for it.

For a more complete explanation of how the series included in this bulletin have been seasonally adjusted and how the results should be interpreted, reference should be made to the description which follows of the seasonal adjustment methods adopted.

## INTRODUCTORY NOTES

### INTRODUCTION

It is often useful and sometimes necessary in interpreting quarterly and monthly statistical series to recognise and take account of the element of variation due to what are commonly known as seasonal influences. As a supplement to personal judgment, statistical techniques can be used to evaluate the effects of normal seasonal influences operating on a series. This kind of evaluation does not call for subjective judgment except in the choice of the appropriate statistical technique. The techniques are called seasonal analysis, and they are designed to enable the series to be seasonally adjusted - that is, to have the estimated effects of normal seasonal influences removed from them.

2. The object of the seasonal adjustment work of the Bureau of Census and Statistics is to publish as many as possible of the most important current statistical series with the estimated effects of normal seasonal influences removed from the series in this way. It is important that users have a clear understanding of what has been removed from the series by seasonal adjustment, and the limitations to which the seasonally adjusted series are subject. It is hoped that these introductory notes will help to achieve this object.



## BASIC PROCESSES OF SEASONAL ADJUSTMENT. ILLUSTRATED BY SIMPLE METHODS

3. The methods of seasonal adjustment applied to series given in this bulletin are extremely complex, but the principles underlying them can be explained by reference to the simpler methods used before the advent of computers. These illustrate basic processes common to most methods.

### Seasonal Factors as Measures of Normal Seasonal Movement

4. Normal seasonal influences on statistical series are those influences that tend to recur regularly once or more a year. Not all statistical series are affected by seasonal influences in a manner regular enough to be called "normal"; if they are not, they cannot usefully be seasonally adjusted. Those that are so affected usually reflect the influence of the seasons themselves (either directly or through production series related to them, such as farm production), or social conventions (such as the incidence of holidays) or administrative practices (such as the timing of tax payments). Many of them also reflect differences in the number of days in the month.

5. The effect of normal seasonal influences on a series is usually estimated from some sort of average of the statistics for a past period. "Normal" is thus used in the same sense as in meteorological statistics. The normal seasonal rainfall in January is the average of the January rainfalls measured over a period of years; similarly the normal seasonal gas production in January, for example, could be measured as the average of the January gas production figures over a period of years (ignoring, for the moment, any trend in production during the period). To obtain seasonally adjusted figures it is necessary to remove from the actual monthly figures the amounts judged to be due to the normal seasonal movement. This could be done by subtracting from each month's figure the normal seasonal excess or adding the normal seasonal shortfall. More commonly it would be done by dividing each month's figure by a ratio (greater or less than one) representing the ratio of that month's normal gas production to the monthly average for a full year. However, in practice the "seasonal factors" needed to do this can only be arrived at after allowance has been made for the trend in the past figures.

### Measurement of Trend

6. Gas production, like most other series of economic statistics, has a long-term upward trend. The average monthly gas production for a full year will therefore tend to increase (not necessarily at an even rate) during the period under review. The common method of measuring the trend is the method of moving averages. A twelve-month moving average of a series is another series, each term of which is the average of twelve consecutive monthly figures in the original series. The centre of this moving average would fall between the sixth and seventh month. To make it fall on a particular month, the average of all pairs of consecutive months in the moving average series itself is taken; this is called a centred twelve-month moving average. The method is illustrated in Table 1. For brevity, the table shows quarters instead of months, but the principle is the same. The four-quarter moving average (called a "4-term moving average") is itself the subject of a "2-term moving average" in the next column, which in effect halves the weights of the end terms and "centres" the moving average on the required quarter.

TABLE 1  
CALCULATION OF TREND BY CENTRED FOUR-QUARTER MOVING AVERAGE  
(PRODUCTION OF GAS, AUSTRALIA, MILLION THERMS)

Quarter	Original	Four-qtr moving total	Four-qtr moving average	Centred four-qtr moving average (a)	Quarter	Original	Four-qtr moving total	Four-qtr moving average	Centred four-qtr moving average (a)
1960 1st	52.8	265.1 264.6 263.3	66.3 66.2 65.8	66.3 66.0 65.8	1963 1st	56.0	278.1	69.5	69.1
2nd	71.3				2nd	74.7	278.8	69.7	69.6
3rd	78.9				3rd	84.4	279.5	69.9	69.8
4th	62.1				4th	63.7	281.9	70.5	70.2
1961 1st	52.3	263.2	65.8	65.8	1964 1st	56.7	282.4	70.6	70.6
2nd	70.0	260.5	65.1	65.5	2nd	77.1	284.3	71.1	70.9
3rd	78.8	262.1	65.5	65.3	3rd	84.9	285.4	71.4	71.3
4th	59.4	264.1	66.0	65.8	4th	65.6	287.7	71.9	71.7
1962 1st	53.9	265.8	66.5	66.3	1965 1st	57.8	289.5	72.4	72.2
2nd	72.0	269.4	67.4	67.0	2nd	79.4	289.6	72.4	72.4
3rd	80.5	271.5	67.9	67.7	3rd	86.7			
4th	63.0	274.2	68.6	68.3	4th	65.7			

(a) This is a 2 x 4-term moving average.

#### Simple Seasonal Adjustment with Allowance for Trend

7. Allowance for the trend, estimated as the centred four-quarter moving average of the original series, can be made either by subtracting trend figures from the original figures quarter by quarter or by dividing the original by the trend figures. The series of differences (plus and minus) or ratios (larger and smaller than one) so obtained are presumed to reflect the effects of all influences affecting the original series apart from the trend. In particular they are considered to include both normal seasonal influences and other, irregular, effects peculiar to the quarter in question. The differences or ratios so obtained are known as seasonal-irregular differences or ratios.

8. The normal seasonal influence for each of the four quarters of the year is estimated as an average of the seasonal-irregular differences or ratios for that quarter of successive years. These four average differences or ratios are referred to as seasonal differences or factors and may be used to adjust the original series for the normal seasonal movement of which they are estimates, thereby giving a seasonally adjusted series. If the differences are used, the method of adjustment is called additive. If the ratios are used it is called multiplicative.

TABLE 2  
ADDITIVE ADJUSTMENT WITH CONSTANT SEASONALS  
(PRODUCTION OF GAS, AUSTRALIA, MILLION THERMS)

Quarter	Original	Trend (Centred four- quarter moving average)	Seasonal-Irregular differences A - B				Seasonal differ- ences (See foot of table)	Season- ally adjusted series A - G
			1st Qtr	2nd Qtr	3rd Qtr	4th Qtr		
	A	B	C	D	E	F	G	H
1960 1st	52.8						- 13.5	66.3
2nd	71.3						5.6	65.7
3rd	78.9	66.3			12.6		13.5	65.4
4th	62.1	66.0				- 3.9	- 5.6	67.7
1961 1st	52.3	65.8	-13.5				- 13.5	65.8
2nd	70.0	65.5		4.5			5.6	64.4
3rd	78.8	65.3			13.5		13.5	65.3
4th	59.4	65.8				- 6.4	- 5.6	65.0
1962 1st	53.9	66.3	-12.4				- 13.5	67.4
2nd	72.0	67.0		5.0			5.6	66.4
3rd	80.5	67.7			12.8		13.5	67.0
4th	63.0	68.3				- 5.3	- 5.6	68.6
1963 1st	56.0	69.1	-13.1				- 13.5	69.5
2nd	74.7	69.6		5.1			5.6	69.1
3rd	84.4	69.8			14.6		13.5	70.9
4th	63.7	70.2				- 6.5	- 5.6	69.3
1964 1st	56.7	70.6	-13.9				- 13.5	70.2
2nd	77.1	70.9		6.2			5.6	71.5
3rd	84.9	71.3			13.5		13.5	71.4
4th	65.6	71.7				- 6.1	- 5.6	71.2
1965 1st	57.8	72.2	-14.4				- 13.5	71.3
2nd	79.4	72.4		7.0			5.6	73.8
3rd	86.7						13.5	73.2
4th	65.7						- 5.6	71.3
Total .. .. .			-67.3	27.8	67.1	-28.2		
Average .. .. .			-13.5	5.6	13.4	- 5.6		
Averages adjusted to sum to zero .. .. .			-13.5	5.6	13.5	- 5.6		

9. Table 2 shows how seasonal adjustment by the additive method can be carried out from the data in Table 1. Average seasonal differences from the centred four-quarter moving average are derived by taking the average of all the first-quarter differences, the average of all the second-quarter differences, and so on. These average seasonal differences (column G) are then subtracted from the original figures to give a seasonally adjusted series.



TABLE 3

## MULTIPLICATIVE ADJUSTMENT WITH CONSTANT SEASONALS

(PRODUCTION OF GAS, AUSTRALIA, MILLION THERMS)

Quarter	Original A	Trend (centred four- quarter moving average) B	Seasonal-irregular ratios A ÷ B				Seasonal factors (See foot of table) G	Seasonally adjusted series A ÷ G H
			1st Qtr C	2nd Qtr D	3rd Qtr E	4th Qtr F		
1960 1st	52.8						0.805	65.6
2nd	71.3						1.080	66.0
3rd	78.9	66.3			1.190		1.197	65.9
4th	62.1	66.0				0.941	0.918	67.6
1961 1st	52.3	65.8	0.795				0.805	65.0
2nd	70.0	65.5		1.069			1.080	64.8
3rd	78.8	65.3			1.207		1.197	65.8
4th	59.4	65.8				0.903	0.918	64.7
1962 1st	53.9	66.3	0.813				0.805	67.0
2nd	72.0	67.0		1.075			1.080	66.7
3rd	80.5	67.7			1.189		1.197	67.3
4th	63.0	68.3				0.922	0.918	68.6
1963 1st	56.0	69.1	0.810				0.805	69.6
2nd	74.7	69.6		1.073			1.080	69.2
3rd	84.4	69.8			1.209		1.197	70.5
4th	63.7	70.2				0.907	0.918	69.4
1964 1st	56.7	70.6	0.803				0.805	70.4
2nd	77.1	70.9		1.087			1.080	71.4
3rd	84.9	71.3			1.191		1.197	70.9
4th	65.6	71.7				0.915	0.918	71.5
1965 1st	57.8	72.2	0.801				0.805	71.8
2nd	79.4	72.4		1.097			1.080	73.5
3rd	86.7						1.197	72.4
4th	65.7						0.918	71.6
Total .. ..			4.022	5.401	5.986	4.588		
Average .. ..			0.804	1.080	1.197	0.918		
Averages adjusted to sum to 4.000 ..			0.805	1.080	1.197	0.918		

10. In Table 3 the multiplicative method is illustrated. The seasonal factor for each quarter in column G is the average for that quarter of the "seasonal-irregular ratios", that is, the ratios of the original quarterly figure to the moving average for the quarter. These seasonal factors are divided into the original figures to give seasonally adjusted figures.



## Seasonally Adjusted Figures as Combination of Trend and Irregular Components

11. In Table 2 the differences between the original series and the corresponding trend values are called seasonal-irregular differences. Similarly, in Table 3 the ratios of the original series to the corresponding trend values are called seasonal-irregular ratios. These names illustrate the assumption underlying most seasonal adjustment methods, namely, that the original series can be represented by three components; trend, seasonal and irregular. Removing the trend (either by subtraction or division) leaves the seasonal-irregulars. The seasonal (for each quarter or month of the year) is derived from these by averaging them, in order to "cancel out" irregulars. The irregular can be isolated in turn by removing both the trend and the seasonal from the original figure.

12. Thus each figure in the original series is assumed to be a combination of trend, seasonal and irregular components, and the following relationships hold :

Original = trend + seasonal + irregular (additive case).

Original = trend x seasonal x irregular (multiplicative case).

The seasonal-irregulars are the original figures with trend removed; thus :

Seasonal + irregular = original - trend (additive case).

Seasonal x irregular = original ÷ trend (multiplicative case).

13. The seasonals are averages of the seasonal-irregulars for each January, February, etc.:

Seasonal for January = average of (seasonal + irregular) for all Januarys (additive case).

Seasonal for January = average of (seasonal x irregular) for all Januarys (multiplicative case).

14. The seasonally adjusted series is the original series with the seasonal removed, which is the same as the trend and irregular combined, that is:

Original - seasonal = trend + irregular (additive case).

Original ÷ seasonal = trend x irregular (multiplicative case).

15. Note that the existence of a seasonal as a component of a figure in a statistical series is merely an assumption. The "true" seasonal, if it exists, is not known, and the methods available only enable it to be estimated. Similarly, the trend is only the estimated trend, as the "true" trend is not known. The irregular depends entirely on the value of the estimates of seasonal and trend.

16. It may be noted in passing that a particular kind of irregular movement occurs if there is a temporary change in a seasonal influence. For example, unemployment may generally increase each year as the fruit-picking season ends, but the season may end a month early in one year. The resulting rise in unemployment may therefore not be offset by seasonal adjustment until the following month, when unemployment would be expected to increase according to the normal seasonal pattern. Therefore, the seasonally adjusted figure for the current month will show an irregular increase, followed by an irregular decrease a month later.

17. The most important inference to be drawn from this method of analysis is that seasonally adjusted series reflect irregulars as well as trend. Therefore they may not be the "smooth" series the user may expect, and they can be used only approximately as measures of trend. An apparent change of direction from one month to another may have been due to the irregular component, not to a change of trend, and the series may resume its former movement the following month. Therefore to determine whether a given change of direction in a seasonally adjusted series is a "downturn" or an "upturn" in the trend requires judgment on the part of the user, which must be based largely on the extent to which the adjusted series has shown irregular movements in the past.

#### Multiplicative and Additive Methods

18. The choice between multiplicative and additive methods depends upon the nature of the series. The multiplicative method is suitable if the seasonal is believed to be proportional to the trend, the additive if it is believed to be fixed, independent of the trend. Thus if the seasonal fluctuations appear to increase as the figures increase, a multiplicative method may be suitable; if they do not, an additive method. As the multiplicative method has been found to be more generally useful than additive, it will be treated as the general method in the remainder of these notes. However the procedure used by the Bureau provides for an additive option to be employed instead where it is considered more suitable.

#### Adjustment for Changing Seasonal

19. The normal seasonal factors for a given period can be estimated, as was shown above, by taking the average of all the January seasonal-irregulars, the average of all the Februarys, and so on. The result, however, may be unsatisfactory if the normal seasonal factors themselves have been changing during the period. They may be changing because of gradual changes in the seasonal influences at work; changes in the structure of the economy, or in consumers' tastes or habits, for example. If such changes are occurring it may be better, for example, to estimate the seasonal for January 1956 by taking the average of the January seasonal-irregulars for 1954 to 1958, than by taking the average of all January seasonal-irregulars for, say, 1947 to 1967. Likewise for January 1962, the seasonal would be estimated by taking the average of all January seasonal-irregulars from 1960 to 1964. Similarly, the other Januarys between 1956 and 1962 would each be adjusted by a different seasonal factor, derived as the average of the five seasonal-irregulars centred on that month. Thus, changing seasonals can be provided for by use of a moving average to estimate seasonal factors. This is in addition to the other moving average used to provide estimates of trend.

20. The number of years in the average could be greater or less than the five of this example; the choice would depend on the size of the irregulars and the apparent rate of change of the normal seasonals.

21. The implication of changing seasonal factors is that the factor used to adjust the January figure this year will be slightly different from that used to adjust the January figure last year, and so on. Clearly this is acceptable only if the differences are all slight, relative to the size of the irregulars customarily observed in the particular series; otherwise the existence of a normal seasonal becomes questionable. As the previous paragraph



points out, this is a matter for judgment in the choice of the period for the moving average of seasonal-irregulars; if it is short, the seasonals will tend to change rapidly and the irregulars to be small; if it is longer, the seasonals will change less rapidly and the irregulars will tend to be greater. Put another way, the separation of the seasonal and irregular components depends upon the nature of the moving average of seasonal-irregulars. If an inappropriate moving average is used, some part of the seasonal will remain in the irregular, or some part of the irregular will remain in the seasonal.

#### Past Seasonal Factors Applied to Current Figures

22. In the example given in Tables 2 to 3, the seasonal adjustment was applied to the same period as that from which the factors had been calculated: the period 1960 to 1965. Each month's figure was adjusted by a factor derived from the period as a whole. When changing seasonal factors are applied to past periods, it is possible to adjust each month's figure by a factor derived from a moving average of seasonal-irregulars which is centred on that same month. However, in official statistical publications, most of the interest in seasonal adjustment is concentrated on the adjustment of the latest available figures. These figures must necessarily be adjusted by seasonal factors derived from past periods. A common practice where simple computation methods are employed is to seasonally adjust the entire series using seasonal factors derived from the immediate past; for example, the five years prior to the month being adjusted. This is termed an asymmetrical adjustment. Alternatively, factors derived from the five years centred upon the year being adjusted are used to adjust all but the initial and final three years, these being adjusted by the factors derived from the initial and final five years of the series. Thus, between the middle years of the series and the current year adjusted on the experience of the recent past, there is a gradual transition from symmetrical to asymmetrical adjustment. After a period of time, what was formerly a "current" figure becomes a "past" figure, and becomes subject itself to symmetrical adjustment.

#### Adjustment for Calendar Irregularities

23. In addition to seasonal adjustment in the sense so far used, in most applications of seasonal adjustment, the attempt is made to remove from the series the influence of irregularities of the calendar. The fact that Januarys have 31 days and most Februarys 28, and so on, is allowed for in the evaluation of seasonal factors as described above. The effect of these differences will be removed as part of the seasonal. What will not be so removed is the effect of some Januarys having four Sundays and some five, and some four weekly pay-days, and some five, and so on. These differences will clearly have their effects on series like retail trade and new motor vehicle registrations. Any flow of goods or services, or money, that tends to follow a weekly cycle, or some cycle shorter than a month, will tend to fluctuate each month because of calendar irregularities of this kind. Variations arising from the number of working days and trading days in the same month of different years exemplify this effect.

24. If some information is available about the relative weight to be given to each day of the week, for the particular series, this information can be used to adjust the series prior to seasonal adjustment in order to remove these effects. Alternatively, the statistics themselves can be subjected to a regression analysis which relates the irregular to the number of days of each kind in each month covered by the series. On this basis the appropriate weight can be estimated for, say, a 30-day month with 5 Fridays and 5 Saturdays, and for months made up of other combinations of days of the week. These weights can be used to adjust the series, in addition to the seasonal factors themselves. Such methods have been used for many years in the Bureau's seasonally adjusted series of average weekly earnings.

LIMITATIONS OF SIMPLE SEASONAL ADJUSTMENT METHODS, AND TECHNIQUES  
FOR OVERCOMING THEM

25. The methods described in the preceding paragraphs are the "classical" techniques of seasonal adjustment. A number of shortcomings of such simple methods have long been recognised. These can be overcome to a considerable extent by the more complex methods developed since automatic data processing has become available. The limitations of the simple methods, and the means available for overcoming them, are described below.

Trend fitting

26. Twelve-month moving averages (and four-quarter moving averages) are satisfactory when the trend is fairly constant, with only gradual changes of direction or slope. But when such changes occur in a relatively short space of time, as they do in some important economic series such as motor vehicle registrations, these twelve-month and four-quarter moving averages are too inflexible to measure the trend accurately. They fail to "get into the corners" at peaks and troughs of the series, because they are affected by the figures in the series that come well before and well after the peak or the trough. This means that the seasonal-irregulars occurring at peaks and troughs of the series tend to be exaggerated. This in turn affects the seasonal factors themselves, as well as being symptomatic of poor trend estimation.

27. To overcome this inflexibility, the process of trend-fitting can be improved, by means of computer techniques. Trends are fitted by an iterative process. The initial twelve-month or four-quarter moving average is used to derive a provisionally adjusted series. This series is then subjected to further trend-fitting; seasonal factors are re-estimated; a further seasonal adjustment is made; and the process is repeated. Each time, the seasonal factors and the trend and the irregulars are modified, until they become relatively stable. At this stage, the irregulars should be randomly distributed from month to month. They would have tended not to be randomly distributed at the first iteration, because large irregulars would have tended to come together in the months near the peaks and troughs, as already mentioned.

28. The trend-fitting carried out by this iterative process is improved if, after the initial evaluation of the trend by a centred twelve-month or four-quarter moving average, the moving averages employed in the iterations are varied in length, being made either shorter or longer than the original twelve-month or four-quarter moving average, according to the type of series. Trend-fitting is also improved if the terms in the moving average are weighted to give the central terms greater effect than those at the beginning and end. The trend value for each month or quarter so derived is, in effect, one point on a smooth curve (defined by the weights used), which could be fitted to the values for the months or quarters included in the average applied.

29. Because seasonal, trend and irregulars are complementary parts of a whole, any improvement effected by the process of iteration in the estimate of one part improves the others.



### Effects of Extreme Values

30. The seasonal factors as estimated by the simple methods described earlier tend to be affected by extreme figures in the series which may be caused by exceptional events such as strikes, floods, unusual weather, or a change in the timing of annual holidays. Such extreme figures will appear as exceptionally large seasonal-irregulars, and these will affect the moving averages by which the seasonal factors are calculated. Although the averaging will dampen them, they will tend to show through the averages if they are large. (The large seasonal-irregulars occurring at peaks and troughs because of inadequate trend-fitting will have similar effects). They will also make the seasonal factors unstable, as the moving average will tend to jump when it takes in one of the large seasonal-irregulars, and fall when it drops one.

31. This problem can be overcome by giving the seasonal-irregular for a month or quarter so affected a reduced or zero weight in the evaluation of seasonal factors. This has the effect of replacing any value identified as extreme with one more in line with those coming immediately before or after it. The seasonal adjustment methods based on computer techniques enable the extreme figures to be identified and modified by objective means. Each initially estimated irregular is tested by being compared with the average level of variability of the others in nearby years in the series. Any that stand out by this test are identified as extreme. The weighting down of seasonal-irregulars for months or quarters, so identified, in the estimation of seasonal factors may be graduated according to the size of the extreme irregular values showing up in the test.

### Estimation of Seasonal Factors

32. The methods of improving trend estimation and adjusting for extreme values just described will, at the same time, have the effect of improving the estimation of seasonal factors. Another means of improving the seasonal factors is to employ a weighted rather than a simple moving average of seasonal-irregulars in estimating them. Thus, in the symmetrical moving averages referred to in paragraph 22, the central term will have the heaviest weight and the first and last terms the lightest weights. This makes the seasonal factors more stable, as they react less sharply to the moving average adding or dropping a term. In the asymmetrical moving averages also referred to in paragraph 22, which are used for estimating seasonal factors for adjustment of current figures, the heaviest weight is given to the last term (that is, the seasonal-irregular for the most recent year), and progressively lighter weights are given to the terms for the earlier years in the moving average. This makes the seasonal factor reflect more closely any new seasonal pattern as it emerges. The computer methods make it practicable for the seasonal adjustment program to provide the graduated transition described in paragraph 22 from symmetrical moving averages for past years to asymmetrical moving averages for recent years, with appropriate changes in the weights as the transition takes place.

### Allowance for Calendar Irregularities

33. Adjustment for calendar irregularities, as described in paragraph 23, can be greatly facilitated by computer methods. The processes (referred to in paragraph 24 above) of evaluating weights for individual days of the week and their transformation to adjustment factors for each month of the series can be handled automatically by a computer program. Extreme values can be identified and discarded in evaluating daily weights by a process similar to that

outlined in paragraph 31. Other forms of calendar irregularity, including the effects of moveable public holidays such as Easter, can be provided for by a computer program.

#### Discontinuities in Seasonal Patterns

34. Some statistical series affected by discontinuities of certain kinds may be difficult to seasonally adjust by simple methods. Such occurrences as industrial disputes and sudden changes in administrative practice, technology or economic circumstances may result in discontinuities in the seasonal patterns for some or all months and quarters of the year. The discontinuities may involve temporary interruption of the normal pattern, or the emergence of a new normal pattern. Seasonal factors estimated for such series by simple methods may not accurately reflect the changed seasonality, so that the seasonally adjusted figures for some years before and after the change would show marked fluctuations on this account. In applying simple methods of seasonal adjustment, it is a common practice to exclude from analyses periods affected by such discontinuities. The use of weighted moving averages referred to in paragraph 32 for estimating seasonal factors to some extent overcomes these problems. In other more severe cases, special allowance must be made. Computer methods offer facilities for adjusting series prior to seasonal adjustment and these can often be used to make appropriate allowance for the effects of serious discontinuities in seasonal patterns.

THE SEASONAL ADJUSTMENT METHODS EMPLOYED IN THE  
COMMONWEALTH BUREAU OF CENSUS AND STATISTICS

Choice of the "Census Method II, X-11 Variants"

35. For the purposes to be served by this Bureau, it was of obvious importance in choosing methods of seasonal adjustment that they incorporate the desirable features just mentioned. Several procedures much used in other countries were considered for adoption. Of those studied initially, none was considered entirely satisfactory as it stood. It was decided to adapt the best developed of the computer programs then available to incorporate further features aimed at improved seasonal adjustment and simplified operations. This involved reconstruction and extension of the basic computer program to allow a wider range of program options, means of assessing the effectiveness of results obtained and arrangements for producing results directly as computer print-out. Considerable progress had been made with this project with the limited man-power resources available when the United States Bureau of the Census published details of the X-11 Variants of the Census Method II seasonal adjustment programs. These programs incorporated the important statistical features considered desirable for the purposes of this Bureau, having many features akin to those of the program then being developed. It would have taken considerable work and time to bring an Australian program into full operation, and as an eminently satisfactory alternative was at hand, it was decided to adopt the Census Method II X-11 and X-11Q Variants for seasonal analysis and adjustment in all but exceptional cases. The X-11 and X-11Q computer programs, along with the necessary technical and procedural papers, were generously provided by the Director of the United States Bureau of the Census.

36. Some minor amendments have since been made to the basic programs in the Commonwealth Bureau of Census and Statistics, and they have been considerably extended to meet specific Australian requirements and to facilitate automatic presentation of results in the format preferred by this Bureau. In addition, work has had to be done to ensure that, of the numerous alternative optional procedures permitted by the programs, the most appropriate was applied in seasonally adjusting each statistical series. The essential work has now been completed to enable publication of seasonally adjusted series in this bulletin and thereafter in relevant Statistical Bulletins already published regularly. Further developmental work remains to be done in order to extend the range of available seasonally adjusted statistics.

37. The X-11 Variant for monthly series and X-11Q Variant for quarterly series are essentially elaborations of the classical methods of seasonal adjustment, incorporating features specifically designed to overcome shortcomings of the kinds described in the previous section. They are extremely elaborate and complicated programs and are hard to describe or explain in any simple terms. No more than a general outline of the special features of these programs is offered in this note. For further details reference should be made to "The X-11 Variant of the Census Method II Seasonal Adjustment Program", Technical Paper No.15, United States Department of Commerce, Bureau of the Census, November 1966, upon which the following account of the X-11 and X-11Q programs is based.



## Additive and Multiplicative Adjustment

38. In both the X-11 and X-11Q programs, provision is made for either multiplicative or additive adjustment. As the latter procedure is used infrequently, the following account refers explicitly to multiplicative adjustment. With appropriate allowances for differences in concept, however, the account given of the operations and features of the multiplicative procedures would apply to the additive processes used by the X-11 programs except in some minor details.

## Methods of Trend Fitting

39. In both programs estimation of the trend (referred to in the United States publications as trend-cycle) involves improving on an initial centred twelve-month moving average by the application of a moving average with Henderson weights to the initial seasonally adjusted values of the series. This process is referred to as the variable trend-cycle curve routine. It is designed to include in the trend estimate any residual component of trend remaining in the initially calculated seasonal-irregular component. In this way improved estimates of the seasonal can be obtained and the irregular component finally derived is more effectively a random (not serially correlated) series. The X-11Q program allows only a five-term weighted moving average in the estimation of trend, while the X-11 program provides, as options, a nine-, thirteen-, or twenty-three-term weighted moving average. The choice is made among these options either automatically by the program or by the use of prior judgment, based upon the ratio of the irregular and trend components as estimated by the program. If the irregular tends to be high in relation to the trend, a long moving average is indicated, to smooth out the effects of the irregulars. If it tends to be low, a short moving average is indicated, to fit the trend more closely to the curves of the data.

40. Provision is made in both programs for the extension of trend estimates to cover all months (or quarters) of the series, that is, not omitting the six months period at the beginning and end, as occurs with the simpler methods (see Table 1, for example). This enables seasonal-irregulars to be computed for every month or quarter of the series.

## Adjustment for Effects of Extreme Values

41. Provision is made to identify and reduce the effects of extreme (i.e. unusually large or small) values, a feature which is called the graduated treatment of extremes. This is done automatically by a comparison of the preliminary estimates of the irregulars with their own standard deviation, as also estimated by the program. This identifies the occurrence of extreme irregulars. The seasonal-irregulars for such months or quarters are given reduced or zero weight in the estimation of seasonal factors. Unless otherwise specified, the seasonal-irregular is given full weight for calculating seasonal factors unless the estimated irregular for that month exceeds 1.5 standard deviations, zero weight if the estimated irregular exceeds 2.5 standard deviations and a proportionate intermediate weight where the estimated irregular lies between these limits. Optional alternative limits are allowed for by the X-11 programs. This is to avoid the assignment of an undue number of zero or reduced weights when the distribution of irregulars may be unusual.

Estimation of Seasonal Factors

42. In the calculation of seasonal factors, both programs employ symmetrical weighted moving averages of seasonal-irregulars, except at either end of the series where asymmetrical "transitional" weighting patterns are provided. These weighted moving averages are designed to minimise erratic year-to-year movements in the seasonal factors. To provide for series of widely differing characteristics (in terms of the average magnitude of estimated irregulars and the variability of the estimated seasonal factors), the X-11 program provides several alternative weighting patterns of varying lengths. This feature is known as the seasonal factor curve routine. Unless otherwise specified, that used by the X-11 program is a three-term moving average of a five-term (3x5) average of the seasonal-irregulars for periods other than at each end of the series, where modified "transitional" weighting patterns are used. This moving average, which is, in effect, a weighted seven-term moving average, is, except at the extreme ends of the series, centred upon the month for which the seasonal is estimated. The method of calculation of the 3x5-term moving average in symmetrical estimation of seasonal factors is illustrated in Table 4. That for asymmetrical estimation is illustrated in Table 5. As optional alternatives, a 3-, 3x3- or 3x9- term moving average may be applied. An additional option provides for a simple average of seasonal-irregulars over the entire series. The X-11Q program, however, allows only for a 3x5-term weighted moving average. The weighting patterns applied in the 3x5-term weighted moving average are set out in Table 6.

TABLE 4

CALCULATION OF 3x5-TERM MOVING AVERAGE OF SEASONAL IRREGULARS  
FOR SYMMETRICAL ESTIMATION OF SEASONAL FACTORS

Month/Year	Seasonal-irregulars	5-term moving totals (centred)	5-term moving averages (centred)	3-term total of 5-term moving averages (centred)	3x5-term average (centred)	Weights applied to seasonal-irregulars (a)
SEASONAL FACTOR FOR JANUARY 1963						
January 1960	.883					.067
January 1961	.877					.133
January 1962	.881	4.381	.8762			.200
January 1963	.874	4.363	.8726	2.6196	.873	.200
January 1964	.866	4.354	.8708			.200
January 1965	.865					.133
January 1966	.868					.067

## SEASONAL FACTOR FOR JANUARY 1964

January 1961	.877					.067
January 1962	.881					.133
January 1963	.874	4.363	.8726			.200
January 1964	.866	4.354	.8708	2.6120	.871	.200
January 1965	.865	4.343	.8686			.200
January 1966	.868					.133
January 1967	.870					.067

(a) The X-11 and X-11Q programs apply the symmetrical 7-term moving average with these weights to obtain the same result as would be given by a 3-term moving average of the 5-term moving average.

TABLE 5

CALCULATION OF 3 X 5-TERM MOVING AVERAGE OF SEASONAL-IRREGULARS  
FOR ASYMMETRICAL ESTIMATION OF SEASONAL FACTORS

Month/Year	Seasonal-irregulars	5-term totals (centred)	5-term moving averages (centred)	3-term totals of 5-term averages (centred)	3x5-term average (centred)	Weights (a) given to seasonal-irregulars
SEASONAL FACTOR FOR JANUARY 1965						
January 1962	.881					.066
January 1963	.874					.133
January 1964	.866	4.354	.8708			.217
January 1965	.865	4.343	.8686	2.6066	0.869	.217
January 1966	.868	4.336	.8672			.217
January 1967	.870					.150
January 1968	.867(b)					-

SEASONAL FACTOR FOR JANUARY 1966						
January 1963	.874					.067
January 1964	.866					.183
January 1965	.865	4.343	.8686			.250
January 1966	.868	4.336	.8672	2.6032	0.868	.250
January 1967	.870	4.337	.8674			.250
January 1968	.867(b)					-
January 1969	.867(b)					-

SEASONAL FACTOR FOR JANUARY 1967						
January 1964	.866					.150
January 1965	.865					.283
January 1966	.868	4.336	.8672			.283
January 1967	.870	4.337	.8674	2.6020	0.867	.284
January 1968	.867(b)	4.337	.8674			-
January 1969	.867(b)					-
January 1970	.865(c)					-

(a) The X-11 and X-11Q programs apply these weights to extend the symmetric 3x5-term moving average. (b) Imputed value, calculated as the average of the 1964, 1965, 1966, 1967 seasonal-irregulars (the last four available seasonal-irregulars). (c) Imputed value, obtained by taking the value for 1965 (the third last available seasonal-irregular).

NOTE. This table follows on from Table 4 which is restricted to years in which symmetrical moving averages apply. It is assumed that the original figure for 1967 is the latest January figure available.

Forward Seasonal Factors

43. Provision is made for the estimation of "forward" estimates of seasonals for the twelve months (or four quarters) following the last month (or quarter) of the series. Forward seasonal factors so derived may be applied to additional (original) values of the series as they become available without the seasonal factors having to be recomputed. This has



obvious operational advantages and makes expensive computer re-analysis unnecessary except at yearly intervals. To take account of changes in the seasonal factors, the forward seasonal factor for each month is computed by adding to the seasonal factor for the last year, one-half the difference between the seasonal factor for that year and that for the preceding year. By appropriate modification of the weights used to obtain the seasonal factor for the last year, the forward factor may be expressed as a weighted average of seasonal-irregulars. Table 6 shows the weights implicit in the estimation of forward seasonal factors, for a 3 x 5-term weighted moving average.

TABLE 6  
THE 3 X 5-TERM SEASONAL MOVING AVERAGE WEIGHTS

The box ☐ indicates the position of the year for which the seasonal is estimated.

Seasonal factor for	Weights applied to seasonal-irregulars for months or quarters of the same name in seven consecutive years							
1st year	<input type="checkbox"/> .284	.283	.283	.150	0	0	0	
2nd year	.250	<input type="checkbox"/> .250	.250	.183	.067	0	0	
3rd year	.150	.217	<input type="checkbox"/> .217	.217	.133	.066	0	
4th year	.067	.133	.200	<input type="checkbox"/> .200	.200	.133	.067	
.. ..	..	..	..	..	..	..	..	
.. ..	..	..	..	..	..	..	..	
4th last year	.067	.133	.200	<input type="checkbox"/> .200	.200	.133	.067	
3rd last year	0	.066	.133	.217	<input type="checkbox"/> .217	.217	.150	
2nd last year	0	0	.067	.183	.250	<input type="checkbox"/> .250	.250	
Last year	0	0	0	.150	.283	.283	<input type="checkbox"/> .284	
Forward factors, 1 year ahead (a)	0	0	-.0335	.1335	.2995	.2995	.3010	<input type="checkbox"/>

(a) Implicit weights (see paragraph 43).

Iteration

44. The programs proceed by iteration, in the manner described in paragraph 27, successively making improved estimates of trend and seasonal factors and progressively revising the weighting of extreme values used in the estimation of seasonal factors.

Allowance for Calendar Irregularities

45. A further feature of the X-11 program (but not the X-11Q) is the trading-day adjustment facility. One option allowed by this facility is the estimation by regression methods of seven daily weights, one for each day of the week. The trading-day regression relates the irregular series to the number of times each day occurs in each particular month; this provides a set of daily weights. From the daily weights so calculated adjustment factors are derived for each month of the series. These are applied to adjust original monthly values prior to seasonal adjustment. Alternatively, trading-day adjustments may be made in terms of seven daily weights determined independently on the basis of 'a priori' knowledge, or from previous analyses of the series. In this case, regression estimates of any residual trading-day effects are provided, together with an indication of their significance, and as a further option a combination of 'a priori' and residual regression estimates so calculated may be employed as trading-day adjustment weights.

46. If trading-day adjustment is used, allowance for the variable lengths of months may be included either with the trading-day adjustment or in the seasonal factor calculations. To allow for any evident change in the trading-day effects over the period covered by the series, provision is made to restrict the basis for the estimation of trading weights to the more recent years, instead of allowing it to extend over the entire series. The regression analysis is programmed to ignore extreme figures, that is, figures for months in respect of which the initially estimated irregulars exceed a specified limit in terms of their standard deviations. The limit is 2.5 standard deviations except where an alternative is specified.

Prior Adjustment Factors

47. The X-11 program and X-11Q program, as adapted in the Commonwealth Bureau of Census and Statistics, make provision for the application of prior adjustment factors to original values whereby account may be taken of various other recognised effects which may influence a series. One use made of this provision is the application of trading-day adjustment factors in analyses of quarterly series. This provision is also employed in adjusting for the effects of moveable holidays, such as Easter and Australia Day, which in successive years may affect different months, and for similar purposes.

48. A further use of this facility is to vary the level of the series in part or as a whole to allow a better "fit" of trend and seasonal factor estimates. An example of the use of this facility is given in paragraphs 55-58.

### Adjustment for Severe Industrial Disputes

49. Both programs provide as an option a further procedure to reduce the effects on the estimated seasonal factors of any severe industrial disputes which may occur. By the application of this option, referred to as adjustment of trend-cycle for strikes, the figures for months or quarters affected by an industrial dispute are replaced in the calculation of trend by substitutes more in line with preceding and subsequent figures. The seasonal irregulars for the periods affected are then more clearly identified and discounted as extreme. In this way the distortion of seasonal patterns resulting from a severe industrial dispute should be largely eliminated from the estimated seasonal factors. The effects of an industrial dispute are, however, fully reflected in the seasonally adjusted series. Care must be exercised in using this option which may also affect estimation for periods of marked trend change.

### Summary Measures

50. From the foregoing account it will be apparent that the programs provide a very large number of alternative optional procedures. To assist in the choices to be made among the various program options and to give an indication of the effectiveness of the seasonal analysis, both programs also provide for the computer to print out a wide range of results, statistical measures, tests of significance and graphs of various kinds. Selected summary measures are given in Appendix C; these are described in paragraphs 63-66 below.

### Summary of Features of the X-11 Programs

51. The more important features of the monthly X-11 program may be summarised as follows :

- (a) It provides for additive as well as multiplicative adjustment (i.e. difference-from-trend as well as ratio-to-trend).
- (b) It yields improved trend estimates by applying an appropriate moving average (chosen automatically from three alternatives) to preliminary seasonally adjusted values, thereby reducing the effects of any residual trend on estimates of seasonal and irregular components. Trend estimates are made for each month of the series and thus permit estimates of seasonal-irregulars over the entire series (including the first and last six months).
- (c) It identifies and discounts the effects of extreme values in estimating seasonals and trend values.
- (d) It allows for gradual changes of seasonal pattern from year to year, estimating separate seasonals for each period as an appropriate weighted average of seasonal-irregulars for months of the same name. Four alternative weighted moving averages are provided, for series of differing degrees of irregularity.



- (e) It estimates forward factors for the twelve months after the latest figure of the series, thus enabling adjustment of additional figures for up to a year without re-analysis.
- (f) It provides for trading-day adjustments and for the estimation of such adjustments from the series itself.
- (g) It allows for optional prior adjustment of the series before analysis, to permit adjustment for influences not otherwise provided for. This facility can be used, among other things, to adjust for the changing effects of holidays such as Easter which differently affect months in successive years.
- (h) It provides as an option a further procedure designed to prevent the seasonal adjustment from being distorted by the effects of any severe industrial disputes.
- (i) It provides a range of summary measures which can be useful in selecting from among the various options available for the analysis and adjustment of a series.

52. The companion X-11Q program used for quarterly series is similar in its features but does not provide for the estimation of trading-day adjustments, or for alternative types of weighted moving averages in the estimation of seasonal factors and trend.

#### Aggregative Seasonal Adjustment

53. The foregoing account of seasonal adjustment methods and of the application of the X-11 programs applies to the adjustment of a series as it stands, that is, the direct adjustment of the original series. Alternatively, it is possible to adjust an aggregate series by seasonally adjusting a number of its components and adding up the results. For example, series of gas production by States could each be seasonally adjusted and the results aggregated to give a seasonally adjusted series for the Commonwealth. In cases where the component series (e.g. State series) exhibit markedly different trends and seasonal patterns, aggregative adjustment may be preferred to direct adjustment. However, the empirical studies made to date suggest that this is usually not the case with Australian series; for most of these, little difference is discernible in the effectiveness of direct and aggregative adjustment and for some, direct adjustment appears superior. As direct adjustment is simpler in operation, its use is to be favoured generally unless the results are recognisably inferior to those of an alternative aggregative adjustment. Though further evidence could lead to some change in practice, for the series included in this bulletin, direct adjustment has been employed in all cases.

54. It is to be noted in this regard that the series relating to employment, unemployment, **registered vacancies**, **retail sales**, **motor vehicle registrations** and **capital expenditure** included in this bulletin appear both as components and aggregates. Following the approach mentioned in the previous paragraph, each of these series has been adjusted independently. This means that while the unadjusted components add to the totals, the adjusted components do not add to the adjusted totals. The differences are

generally not large, in comparison with the month-to-month variability of the seasonally adjusted series.

#### Allowance for Abrupt Change of Seasonal Pattern

55. It has been said earlier that if the normal seasonal pattern disappeared a series could not usefully be seasonally adjusted. Nothing could be done until a new seasonal pattern had emerged. If such a thing happened, the seasonal adjustment programs described in this bulletin would be ineffective for the particular series so affected. In such a case, the adjusted series would be very irregular, with some tendency for residual seasonal peaks and troughs to show as any new seasonal pattern emerged which the old seasonal factors were incapable of neutralising. In these circumstances little could be done but to suspend publication of the adjusted series.

56. However, seasonal patterns may change partially, with perhaps only a few months of the year affected by the change. For example, the seasonal-irregulars for January might suddenly increase in magnitude, in the same direction, and continue at the new level for the next two years with only minor changes in the seasonal-irregulars for other months. This would produce residual seasonal effects for the Januarys in the adjusted series; a sharp dip might appear every January, indicating inadequate seasonal adjustment. The reasons for this change could be examined and if it were clearly due to something that was unlikely to be reversed in the short run (for example a legislative change affecting annual leave), steps could be taken, by means of a prior adjustment factor, to eliminate the residual seasonal effects. By a statistical comparison of Januarys before and after the change, a factor could be estimated by which the original January figures prior to the change could be increased, or the January figures after the change reduced, to produce a series of January figures on a comparable basis, with minor complementary adjustments to the figures for the other months. Thus, in effect, the original series would be seasonally adjusted by the product of the seasonal factors calculated by the program on the basis of the prior adjusted series and the prior adjustment factors used to allow for the abrupt change of seasonal factors.

57. Obviously, this technique must be used with great care, and of the series in this bulletin it has been applied to only four production series: electric motors under one horsepower; woven cotton cloth; woven woollen cloth; and boots and shoes. The January figures in these series appear to have been affected since 1963 by changes in plant shut-down practices associated with the extension of statutory annual leave from two to three weeks. The estimated factor to adjust the January figures for this has been applied to the January figures prior to the change, by means of a prior adjustment factor. Although the figures for other months have had to be adjusted at the same time in a complementary way, the change for these months has been quite small.

58. It should be noted that this technique should be applied only after the event, as it were, when the effects of the change on the months affected can be estimated. It cannot reasonably be applied at the time of the change in seasonality.



## Summary of X-11 Program Options

59. The optional alternative procedures provided by the X-11 programs are in respect of:

- (a) Multiplicative or additive adjustment
- (b) Variable trend-cycle routine
- (c) Seasonal factor curve routine
- (d) Graduated treatment of extremes
- (e) Trading-day adjustment (for the X-11 monthly program but not the X-11Q program for quarterly series)
- (f) Prior adjustment, and
- (g) Adjustment for severe industrial disputes.

60. A wide variety of seasonal adjustment procedures is thus permitted by either program. This is to suit the widely differing characteristics of series in respect to the magnitude of the trend, seasonal and irregular components of variation and of some spasmodic influences which may affect series. A full appreciation of the methods and of the results obtained for particular series requires an understanding of the way in which available program options apply. The following brief account of the available program options is given with this in mind. Some of the options referred to are available only for the X-11 (monthly) program and not for the X-11Q (quarterly) program.

- (a) Additive or Multiplicative Adjustment. As described in paragraph 18 above, one or the other procedure must be used.
- (b) Variable Trend-cycle Curve Routine. As outlined in paragraph 39 above, the X-11 program provides as optional alternatives 9-, 13-, or 23-term (Henderson) weighted moving averages of the initially estimated seasonally adjusted series for purposes of trend estimation. The appropriate weighted moving average may either be selected automatically by the computer or be specified independently. The X-11Q program provides only a 5-term weighted moving average.
- (c) Seasonal Factor Curve Routine. As outlined in paragraphs 42 and 43 above, the X-11 program provides as optional alternatives for estimating seasonal factors 3-, 3x3-, 3x5-, or 3x9-term weighted moving averages or a simple average covering all years of the series. Unless otherwise specified, the program employs as standard a 3x5-term weighted moving average but any of the alternatives may be employed for estimating seasonal factors for any named month. The X-11Q program provides only a 3x5-term weighted moving average.
- (d) Graduated Treatment of Extremes. As mentioned in paragraph 41 above, both programs provide for graduated treatment of extremes, giving reduced or zero weight to seasonal-irregulars in the calculation of seasonal factors for months in respect of which the estimated irregular is identified as extreme by reference to their standard deviation. Zero weight is given if the

estimated irregular exceeds 2.5 standard deviations, full (unit) weight if it is less than 1.5 standard deviations and a proportionate intermediate weight if it is between these limits. Alternative limits may optionally be specified.

- (e) Trading-day Adjustment. Only the X-11 program provides for trading-day adjustment, this feature generally being unnecessary for quarterly series. If used, trading-day weights (a weight for each day of week) upon which the trading-day adjustments are based, may be derived alternatively from prior estimates derived from data independent of the series, or from regression estimates based upon an analysis of the series itself performed automatically as part of the X-11 program. A third alternative option is a combination of prior and residual regression estimates (as described in paragraph 45), again provided automatically by the program. Further X-11 program options, described in paragraph 46, provide for combination of length-of-month adjustment with either the seasonal factors or trading-day adjustments; application of regression estimation of daily weights either to the whole series or the part of a series following a specified year; and variation of limits for identifying extremes for purposes of the trading day regression.
- (f) Prior Adjustment. As described above in paragraph 47, a prior adjustment may be made to any or all of the figures in the series to yield a prior adjusted series, which is then subject to seasonal analysis. This prior adjustment is made by the application of prior adjustment factors to some or all of the months or quarters covered by the series. Prior adjustments, as mentioned in paragraphs 47 and 48 may be employed to allow for a variety of spasmodic influences. The uses actually made of this facility in the adjustment of series in this bulletin are as follows :
  - (i) Trading-day adjustment for quarterly series, in the few cases where evidence of trading-day effects is detected,
  - (ii) Easter adjustment, to standardise the incidence of Easter by adjusting the figures in years when it falls in March instead of April, in those series where this effect appears to be significant,
  - (iii) Australia Day adjustment, to allow similarly for the varying date of the Australia Day holiday in consequence of which January and February figures appear to be affected significantly, and
  - (iv) Adjustment of an abrupt change in seasonal pattern which may not otherwise be adequately handled by the program. The procedure used is outlined above in paragraph 56. This option has been used for only four series (see paragraph 57).

- (g) Adjustment for Severe Industrial Disputes. This option is described in paragraph 49. No use has been made of this option in the adjustment of series included in this bulletin.

61. In the interpretation of seasonally adjusted series, the application of the standard options may be taken largely for granted by users of seasonally adjusted series as being technical in nature. These are the options concerning multiplicative or additive adjustment, the variable trend cycle curve routine, the seasonal factor curve routine and the graduated treatment of extremes ((a), (b), (c) and (d) above). Users should take note of whether use has been made of trading-day adjustment, prior adjustment for various purposes, and adjustment for severe industrial disputes ((e), (f) and (g) above). This is important as their application can markedly affect the results obtained and the interpretation to be placed on them.

62. The particular program options employed in the adjustment of each of the series included in this bulletin are set out in Appendix B, "Program Options Employed".

### Summary Measures

63. Reference has been made in paragraph 50 to the large range of results, statistical measures, tests of significance and graphs provided by the X-11 programs as computer printout and to the use made of the "summary measures" in the choice of program options. Others help the user to interpret the results by giving some indication of the relative magnitude of the seasonal effects that have been removed from the series, and some guide as to how much of the variability of the series is due to trend and to irregular elements. Some of the more important and easily interpreted summary measures for each of the series included in this bulletin are given in Appendix C, "Measures of Variability".

64. The summary measures given in Appendix C are the average percentage change from month to month (without regard to sign) in the original and seasonally adjusted series, in the trend and irregular series, in the seasonal factors, and in the trading-day adjustments where these have been made. These measures, in effect, show the relative importance of each of these influences in the average variability of the series from month to month. For seasonal factors, the average percentage change from year to year (without regard to sign) is also given. This shows the average rate at which the seasonal pattern is estimated to be changing from year to year.

65. The effects removed by any prior adjustments made, such as those made in some series for Easter or Australia Day, are not included in the summary measures relating to the trend and irregular series, seasonal factors and trading-day adjustment.

66. The measures of variability given in Appendix C serve to give some indication of whether a movement in a seasonally adjusted series is attributable to influences beyond the normal irregular variation and normal changes in the seasonal pattern. It is, however, to be borne in mind that measures of the month-to-month and year-to-year change given in Appendix C are averages; changes for individual months and years may be considerably larger or smaller than the averages shown.



Revisions to Published Series

67. It will be necessary to revise published seasonally adjusted statistics from time to time. This will be necessary, not only because of amendments in the original series, but because the adjusted series will be changed every time the computer analysis is repeated to bring in another year's figures. This will mean revision of the whole seasonally adjusted series, although the changes in early years would be expected to be minor. As mentioned in paragraph 43, the X-11 programs provide for forward seasonal factors to be computed for the twelve months or four quarters following the most recent figure included in the series analysed. This means that the computer analysis must be done at least annually. Current seasonal adjustment, between the intended annual analyses, will be done by desk calculation; each unadjusted figure as it becomes available has only to be divided by a factor which combines the forward seasonal, trading-day and prior adjustment factors for that month or quarter.

68. On occasion, as a result of amendments to unadjusted figures, it will be necessary to revise the seasonally adjusted series accordingly, without waiting for the next annual computer analysis. Where a material revision has been made, one which would appreciably affect the seasonal factors, the amended series will have to be re-analysed on the computer to obtain a revised seasonally adjusted series and revised forward seasonal factors. However, in cases of isolated amendments, it can be expected that the revised seasonally adjusted series would differ perceptibly only in respect of the figures amended in the original series. Therefore the computer analysis would not be repeated for such amendments. The relevant seasonal, trading-day and prior adjustment factors would simply be applied to the amended original figure to obtain the necessary revised seasonally adjusted one.

69. The fact that seasonally adjusted series will be revised every time the computer absorbs another year's data is inherent in the nature of the X-11 program and, in fact, all complex programs of this kind. Additional new data, when added to the series, are necessarily taken into account in calculations applying to past periods. In effect, the new data provide further observations upon which estimates of trend, seasonal factors and limits for identifying extreme values are based. The later estimates, presumably the more accurate, can generally be expected to differ somewhat from earlier ones based upon a shorter series of original data. Except in special cases of the kind referred to in paragraph 72 it is intended to employ the same set of program options at successive repetitions of the computer analysis. Trading-day and prior adjustment factors may, however, be varied where this appears desirable.

70. As a rough rule of thumb, derived from Australian monthly series analysed to date, the average of the differences between successive revisions in the seasonally adjusted monthly series can be expected to be approximately one-half the average percentage change from month to month in the irregular series (given in Appendix C) for the most recent common year, but this can be expected to fall to about one-fifth of the average percentage change from month to month for years four or more earlier. Comparable revisions to quarterly series can be expected.

71. In the seasonally adjusted figures for some individual months, however, some revisions may be considerably larger (or smaller) than those suggested by this rule of thumb. This tendency is most marked for months affected by large changes in trend or seasonal pattern. As might be expected, the tendency of successive revisions is generally to "smooth out" fluctuations appearing in the initial seasonally adjusted series.

72. Although variation of the program options initially determined will be exceptional, it is considered that changes should be made where a materially improved seasonal analysis can be obtained by this means. It can, therefore, be expected that some variations in the seasonal adjustment methods applied to particular series will be made in the light of further research into seasonal adjustment procedures and investigations of the changing character of individual series.

#### Seasonal Adjustment of Average Earnings

73. Quarterly statistics of average earnings per employed male unit have been published by the Commonwealth Bureau of Census and Statistics in seasonally adjusted form for over twenty years. In the seasonal adjustment of these series, some special features known to affect them have had to be taken into account, such as the changeable admixture in each quarter's figure of regular weekly, fortnightly and monthly wage and salary payments and periodic variations of awards affecting the earnings and conditions of large numbers of employees.

74. Owing to these unusual features, the results so far obtained with this series from the X-11Q seasonal adjustment program have not been entirely satisfactory. In view of this, and pending revisions to the data upon which the series are based, no statistics of average earnings are included in this bulletin. It is intended for the time being to continue publication of results for these series on the same basis as hitherto in the "Wage Rates and Earnings" bulletin, the "Monthly Review of Business Statistics" and the "Labour Report".

LIMITATIONS OF SEASONALLY ADJUSTED STATISTICS

75. Despite their versatility, the X-11 programs rely essentially upon the logic of the simple classical methods described earlier. Although they overcome many of the shortcomings of simpler methods, they are subject to the same basic limitations of all such methods. Of these, the most important limitation stems from the inherent impossibility of defining precisely the trend, seasonal and irregular components (at least for statistics relating to economic and social phenomena) except in terms of estimates obtained by a particular method. Consequently, no objective assessment of reliability may be made for any such methods, and comparisons of results obtained by alternative procedures must always involve an element of judgment.

76. A further limitation derives from a fundamental assumption underlying seasonal analysis and adjustment techniques. It is assumed implicitly that while trends and seasonal patterns underlying the series may change, such changes are not abrupt. The X-11 programs, and in fact all seasonal adjustment programs yet developed, tend to yield recognisably unsatisfactory results where an abrupt change affects the seasonal pattern of a series.

77. The optional alternative procedures allowed by the X-11 programs provide some means for overcoming problems of this kind. However, the remedies provided by the X-11 program are available only some time after the change has occurred. It is impossible for the most part to recognise and assess changes in seasonality at the time they occur. The seasonal analysis alone cannot indicate whether an unexpected movement appearing in current seasonally adjusted figures denotes a variation in trend or an unusual (irregular) effect, or whether it is due to an abrupt change in seasonality.

78. Furthermore, it is to be borne in mind that by using alternative program options the X-11 programs will yield results which may differ markedly from each other. As implied above, it is sometimes by no means easy to decide which of some feasible options should be employed.

79. Consequently, it would be neither reasonable nor prudent to regard seasonally adjusted series as in any way "definitive". They must be treated with caution as being no more than useful indicators of movements. They can without doubt be a useful aid to critical interpretation, but can in no way be a substitute for it.

PRESENTATION OF SEASONALLY ADJUSTED STATISTICS

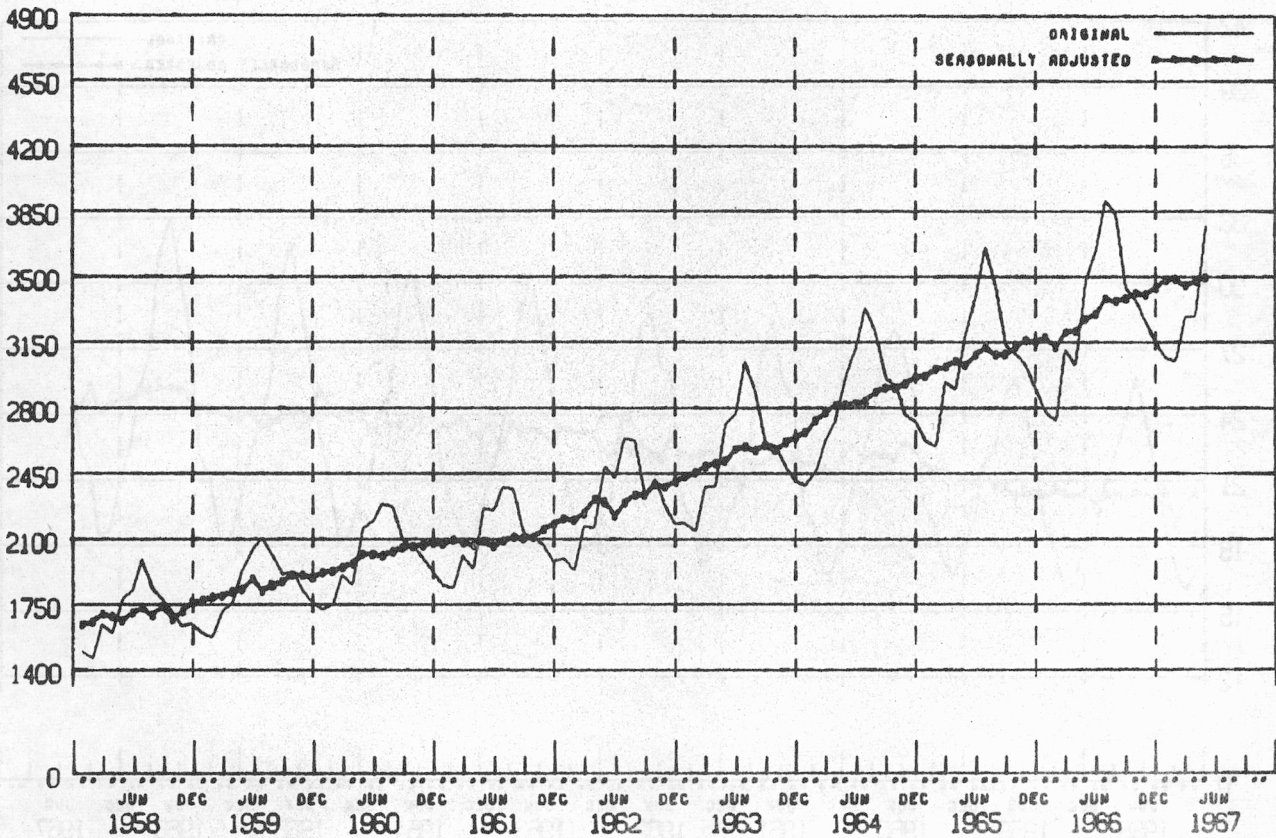
80. The series in this bulletin are presented as originally compiled and seasonally adjusted both in graphical and tabular form. Additional information, beyond that appearing with the figures for each series, is given in Appendix A, under "Explanatory Notes" and in the publications listed in Appendix A, under "Publications for Further Reference".

81. So that the current statistics may be seen in context, the series given in this bulletin where possible cover about ten years up to the most recent figures available. It is intended that the bulletin will be re-issued annually, following annual re-analyses of the series.

82. Further seasonally adjusted figures for each of these series are to be published, as they become available, in the relevant current publications of the Bureau of Census and Statistics as shown in Appendix A, under "Publications for Further Reference".



ELECTRICITY PRODUCTION  
MILLION KWH

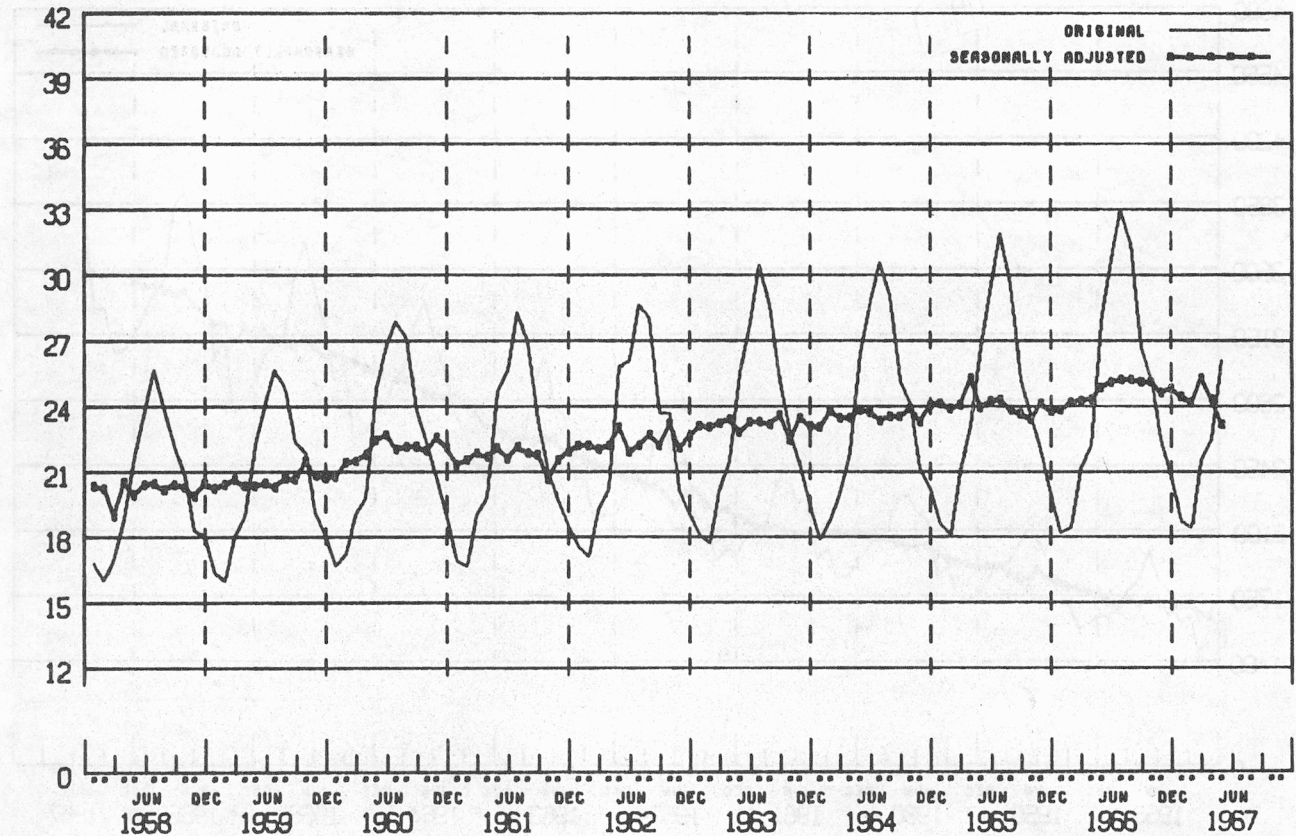


YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
ORIGINAL												
1958	1497	1463	1648	1595	1777	1824	1994	1835	1780	1699	1633	1645
1959	1596	1577	1709	1755	1936	2052	2105	2016	1914	1925	1924	1765
1960	1721	1752	1914	1857	2159	2195	2287	2276	2096	2055	2004	1924
1961	1851	1839	2019	1937	2270	2251	2382	2364	2129	2110	2072	1980
1962	1995	1932	2171	2162	2489	2424	2641	2630	2324	2421	2284	2185
1963	2184	2144	2379	2382	2717	2774	3051	2891	2613	2600	2493	2410
1964	2390	2463	2616	2734	2970	3125	3342	3207	2964	2919	2764	2732
1965	2622	2598	2950	2895	3200	3408	3661	3453	3135	3090	3035	2905
1966	2777	2730	3114	3025	3476	3649	3911	3836	3440	3374	3263	3148
1967	3065	3053	3288	3292	3776							
SEASONALLY ADJUSTED												
1958	1648	1657	1700	1685	1663	1710	1735	1694	1741	1673	1718	1764
1959	1772	1791	1796	1819	1831	1887	1826	1852	1876	1909	1910	1900
1960	1925	1934	1951	1976	2021	2020	2018	2036	2060	2067	2073	2086
1961	2078	2098	2086	2072	2090	2065	2092	2111	2104	2113	2154	2182
1962	2212	2208	2237	2315	2303	2228	2295	2338	2337	2391	2380	2409
1963	2437	2454	2490	2505	2519	2584	2598	2577	2606	2578	2618	2645
1964	2675	2734	2778	2823	2818	2830	2843	2891	2913	2915	2930	2967
1965	2974	3007	3023	3054	3034	3085	3127	3089	3086	3130	3167	3158
1966	3179	3127	3206	3210	3275	3306	3385	3375	3386	3413	3411	3446
1967	3487	3496	3460	3478	3500							

NOTE - ALL SEASONALLY ADJUSTED FIGURES ARE SUBJECT TO REVISION.



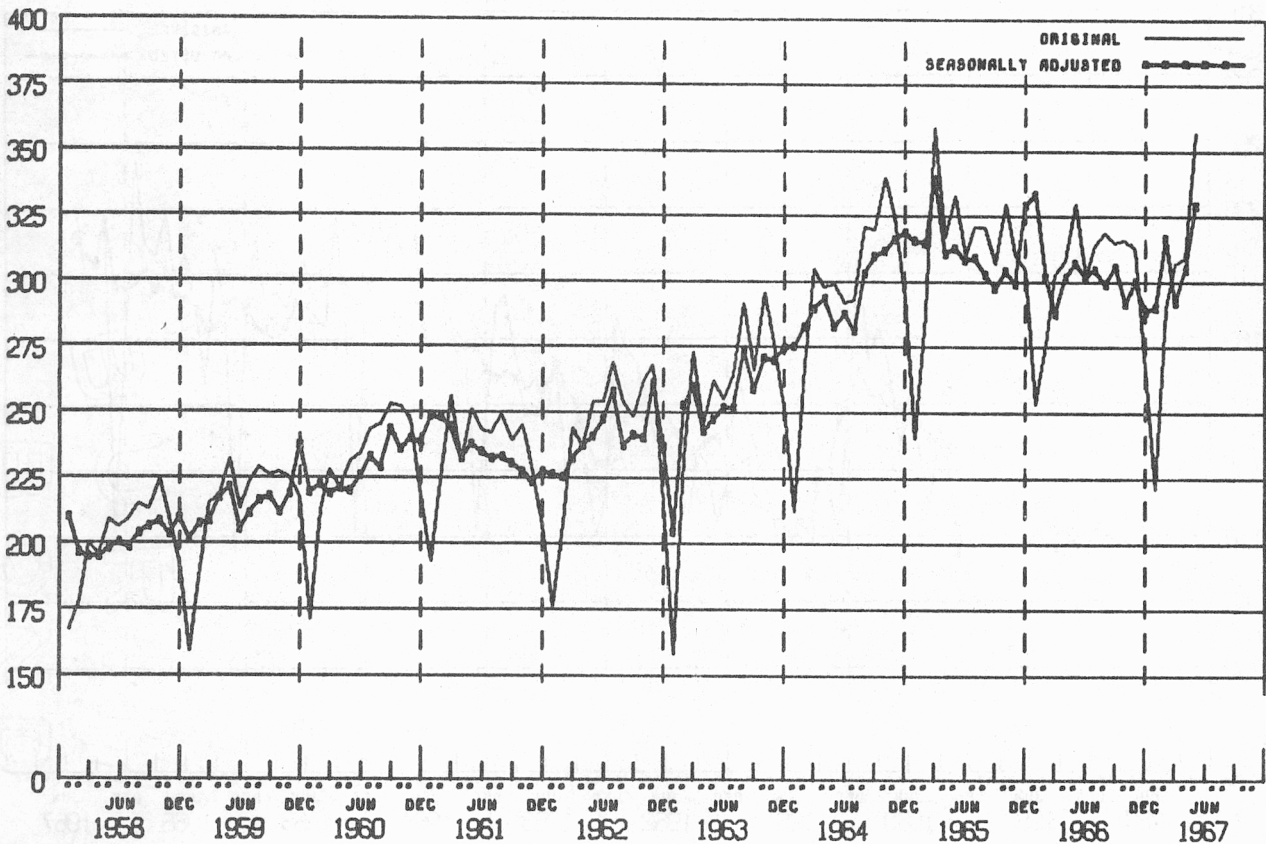
GAS PRODUCTION  
MILLION THERMS



YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
ORIGINAL												
1958	16.8	16.0	16.9	18.8	21.7	23.8	25.7	23.9	22.2	20.8	18.3	18.1
1959	16.4	16.0	18.0	18.9	22.2	24.2	25.7	24.9	22.4	21.9	19.2	18.1
1960	16.7	17.2	19.0	19.8	24.8	26.8	27.9	27.2	23.9	22.3	20.8	19.0
1961	16.9	16.7	19.0	19.8	24.7	25.6	28.3	27.0	23.4	21.0	19.8	18.6
1962	17.6	17.1	19.2	20.2	25.8	26.1	28.7	28.1	23.7	23.7	20.2	19.1
1963	18.1	17.7	20.1	21.5	25.5	27.8	30.5	28.7	25.2	22.8	21.4	19.5
1964	17.9	18.8	20.0	21.9	26.4	28.8	30.6	29.1	25.2	24.1	21.2	20.3
1965	18.6	18.1	21.0	23.1	26.7	29.6	31.9	29.6	25.2	23.5	22.1	20.0
1966	18.2	18.4	21.1	22.2	27.8	30.7	33.0	31.5	26.7	25.2	22.5	20.8
1967	18.7	18.4	21.5	22.5	26.1							
SEASONALLY ADJUSTED												
1958	20.4	20.3	19.0	20.6	20.0	20.5	20.5	20.2	20.4	20.4	19.9	20.5
1959	20.3	20.4	20.7	20.4	20.4	20.5	20.4	20.7	20.7	21.5	20.9	20.8
1960	20.8	21.5	21.5	21.9	22.5	22.7	22.1	22.2	22.2	22.0	22.6	22.1
1961	21.3	21.6	21.9	22.7	22.1	21.6	22.2	21.9	21.8	20.7	21.6	22.0
1962	22.3	22.2	22.1	22.2	23.1	22.0	22.2	22.7	22.3	23.3	22.1	22.7
1963	23.2	23.1	23.3	23.5	22.9	23.4	23.3	23.2	23.7	22.5	23.5	23.2
1964	23.1	23.8	23.5	23.5	23.9	23.7	23.4	23.6	23.6	23.9	23.3	24.1
1965	24.2	23.9	24.1	25.3	24.0	24.3	24.4	23.9	23.7	23.5	24.2	23.8
1966	23.9	24.2	24.3	24.4	24.9	25.1	25.3	25.3	25.1	25.1	24.7	24.8
1967	24.5	24.2	25.3	24.4	23.2							

NOTE - ALL SEASONALLY ADJUSTED FIGURES ARE SUBJECT TO REVISION.

CEMENT PRODUCTION  
'000 TONS

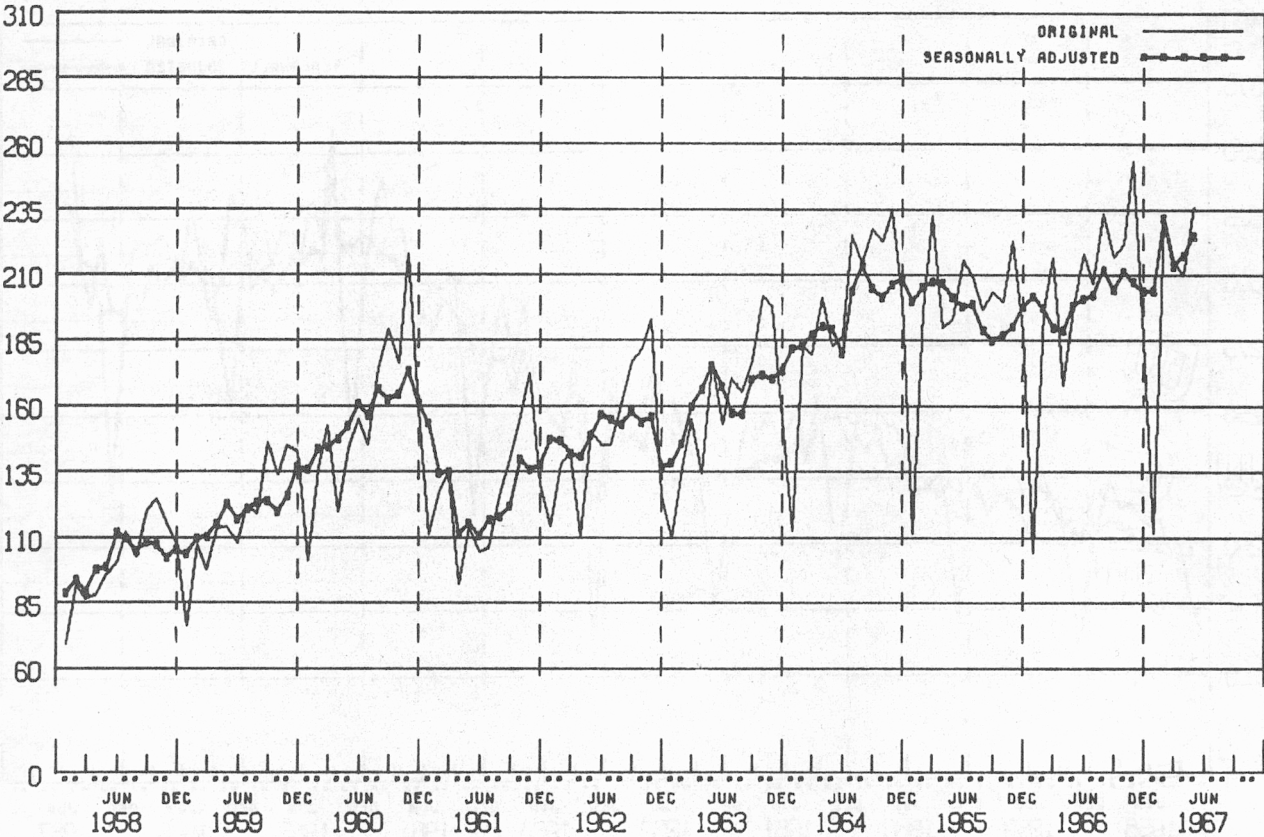


YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
ORIGINAL												
1958	167	178	200	196	209	206	209	215	213	224	210	193
1959	159	190	215	218	232	213	223	229	226	227	225	218
1960	171	212	228	221	231	234	243	245	253	252	247	218
1961	193	228	256	231	251	243	242	249	239	245	229	207
1962	176	207	244	237	254	254	269	254	248	262	268	216
1963	158	232	273	245	262	255	264	292	266	296	277	252
1964	212	268	305	298	299	292	293	321	320	340	325	295
1965	240	288	359	317	333	310	321	321	307	330	311	305
1966	253	276	303	308	330	302	314	319	315	316	313	267
1967	221	290	307	309	357							
SEASONALLY ADJUSTED												
1958	210	196	195	195	198	200	199	204	207	209	204	209
1959	202	208	208	217	222	206	212	217	218	212	219	237
1960	220	222	219	221	220	226	233	229	244	236	240	238
1961	248	248	245	233	238	235	232	233	230	228	224	228
1962	226	225	232	238	241	247	258	237	242	240	262	237
1963	204	253	260	243	248	252	252	274	259	271	270	275
1964	276	283	290	294	283	288	281	303	310	312	316	319
1965	316	315	340	311	313	308	310	303	298	305	299	329
1966	334	302	288	302	307	302	305	300	306	292	301	289
1967	291	317	292	305	329							

NOTE - ALL SEASONALLY ADJUSTED FIGURES ARE SUBJECT TO REVISION.

ELECTRIC MOTORS UNDER ONE H.P., PRODUCTION

'000



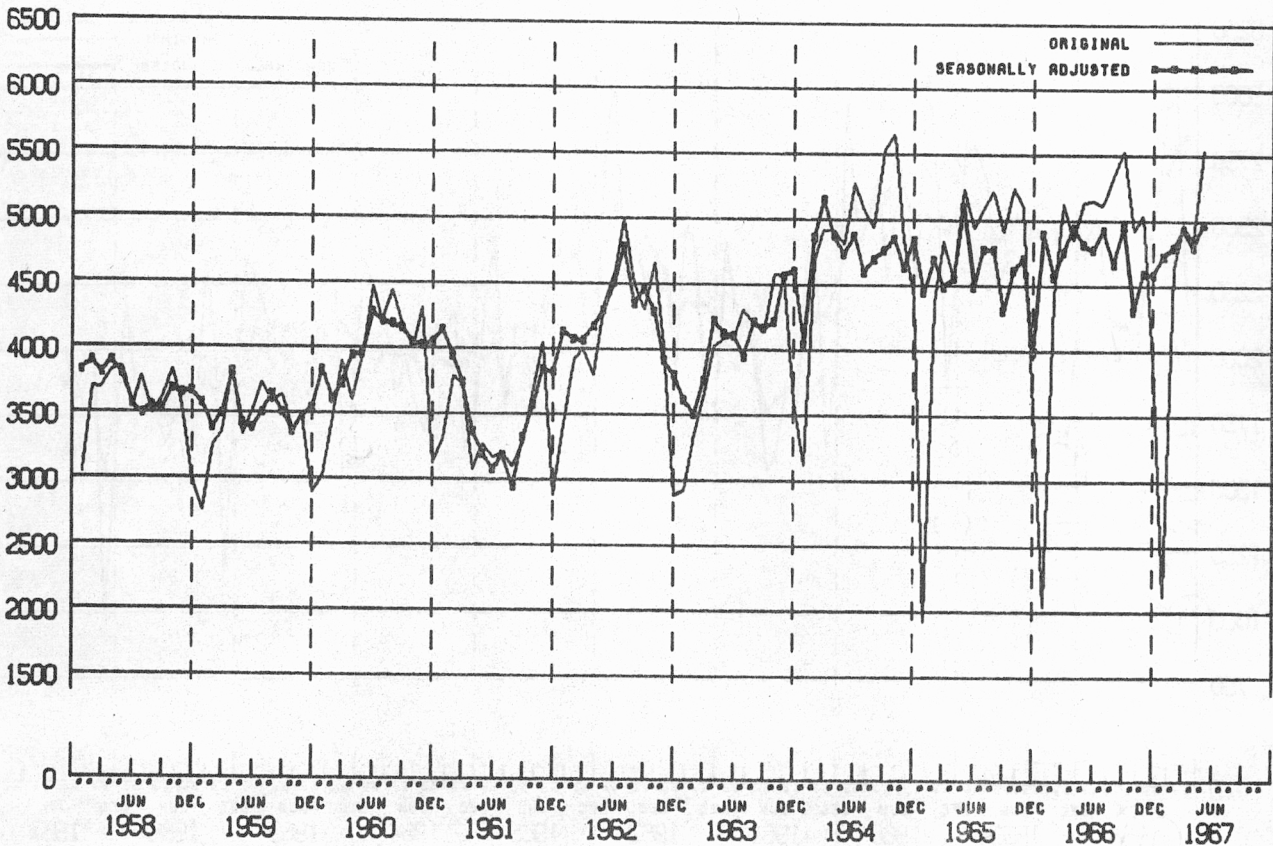
YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
ORIGINAL												
1958	69.1	92.2	86.4	88.0	95.4	99.9	112.2	102.3	120.0	124.7	115.2	107.5
1959	75.9	107.3	97.5	113.5	113.9	108.0	122.5	119.2	146.1	133.5	144.8	143.2
1960	100.8	135.8	152.7	119.7	143.3	155.0	144.8	173.8	188.8	176.0	219.1	158.4
1961	110.8	127.6	133.9	91.8	113.9	104.5	106.0	125.5	139.5	156.0	172.3	130.0
1962	114.0	137.4	142.3	109.9	150.5	145.0	145.2	160.0	176.6	181.4	193.1	126.1
1963	109.5	135.8	154.9	133.8	176.3	152.7	170.7	164.8	176.9	202.1	197.9	154.8
1964	112.3	182.8	179.3	201.2	182.4	186.6	224.8	213.9	227.6	222.6	234.4	199.6
1965	111.6	195.8	232.6	189.3	193.1	215.7	209.4	196.4	203.4	199.4	223.2	188.1
1966	103.9	196.7	216.6	167.6	197.6	218.2	206.7	233.4	216.5	221.4	253.5	185.6
1967	111.3	231.9	216.1	209.5	236.0							
SEASONALLY ADJUSTED												
1958	89.1	93.9	89.6	97.9	99.2	112.1	109.8	104.8	108.6	107.5	102.6	105.5
1959	103.9	110.1	110.5	115.7	123.0	116.9	121.0	123.7	124.1	120.1	125.9	137.0
1960	136.1	143.8	144.7	147.7	152.4	160.8	156.3	166.4	162.3	164.3	173.5	160.8
1961	153.5	134.6	134.8	111.6	115.3	110.8	116.8	118.1	121.9	139.8	136.0	137.7
1962	147.6	147.2	142.0	141.1	149.2	156.9	154.9	152.8	157.9	153.8	156.2	136.7
1963	138.6	146.2	159.8	166.5	175.7	167.7	157.6	157.2	170.7	171.8	170.4	173.4
1964	181.9	182.8	187.5	190.7	189.4	179.8	204.1	213.6	204.9	201.4	206.4	208.4
1965	200.0	205.7	207.7	207.0	201.6	198.2	199.0	188.8	185.1	187.2	190.4	197.8
1966	202.2	197.6	189.8	189.0	198.7	201.0	202.4	212.0	204.3	211.5	207.7	204.2
1967	204.1	231.8	213.4	217.6	224.8							

NOTE - ALL SEASONALLY ADJUSTED FIGURES ARE SUBJECT TO REVISION.



COTTON WOVEN CLOTH PRODUCTION  
(EXCLUDING TOWELS AND TOWELLING)

'000 SQ. YDS.

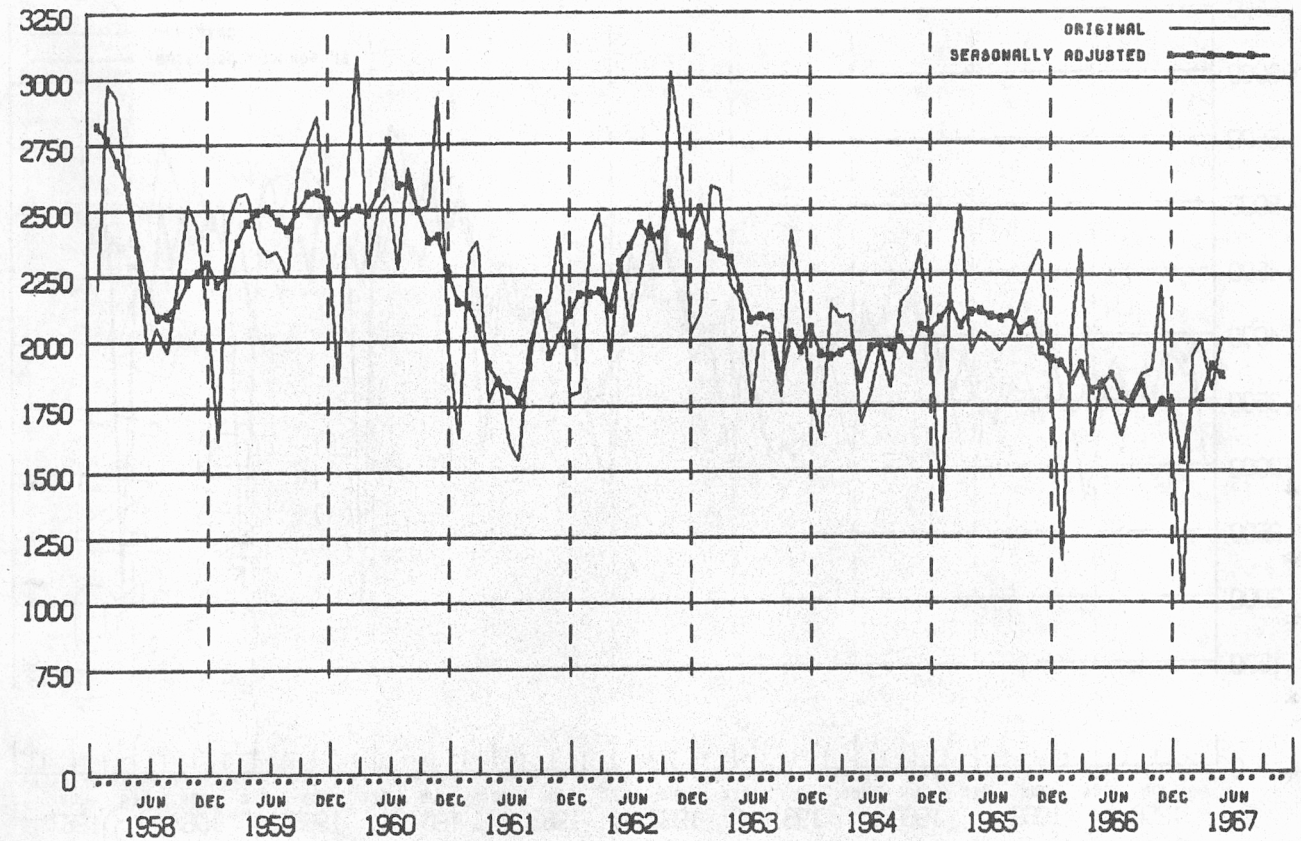


YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
ORIGINAL												
1958	3038	3704	3686	3823	3854	3552	3780	3492	3606	3826	3547	2989
1959	2747	3248	3342	3847	3327	3521	3725	3582	3643	3363	3483	2890
1960	3012	3460	3897	3605	3935	4465	4203	4444	4160	4004	4308	3121
1961	3296	3792	3738	3070	3268	3172	3200	3105	3279	3704	4045	2885
1962	3424	3919	4004	3797	4343	4578	5004	4505	4303	4659	4029	2884
1963	2917	3351	3620	4024	4089	4096	4308	4197	4138	4584	4569	3616
1964	3118	4686	4923	4916	4812	5278	5078	4942	5527	5654	4851	4411
1965	1920	4359	4835	4547	5243	4937	5084	5219	4913	5249	5099	3564
1966	2037	4405	5131	4851	5141	5152	5125	5326	5526	4924	5043	3927
1967	2119	4630	4968	4839	5539							
SEASONALLY ADJUSTED												
1958	3834	3899	3812	3900	3802	3569	3497	3558	3537	3690	3656	3665
1959	3584	3392	3502	3816	3429	3389	3508	3648	3514	3360	3475	3540
1960	3843	3605	3729	3954	3957	4284	4210	4190	4165	4049	4028	4047
1961	4152	3950	3746	3372	3200	3083	3186	2946	3329	3578	3849	3830
1962	4143	4085	4074	4177	4299	4512	4795	4347	4463	4291	3923	3811
1963	3623	3508	3773	4225	4125	4109	3947	4218	4171	4220	4569	4613
1964	4054	4866	5158	4880	4737	4883	4595	4697	4769	4859	4644	4852
1965	4447	4703	4491	4563	5113	4492	4779	4776	4306	4624	4715	3999
1966	4897	4569	4762	4952	4819	4780	4930	4668	4962	4311	4595	4585
1967	4731	4804	4945	4798	4979							

NOTE - ALL SEASONALLY ADJUSTED FIGURES ARE SUBJECT TO REVISION.



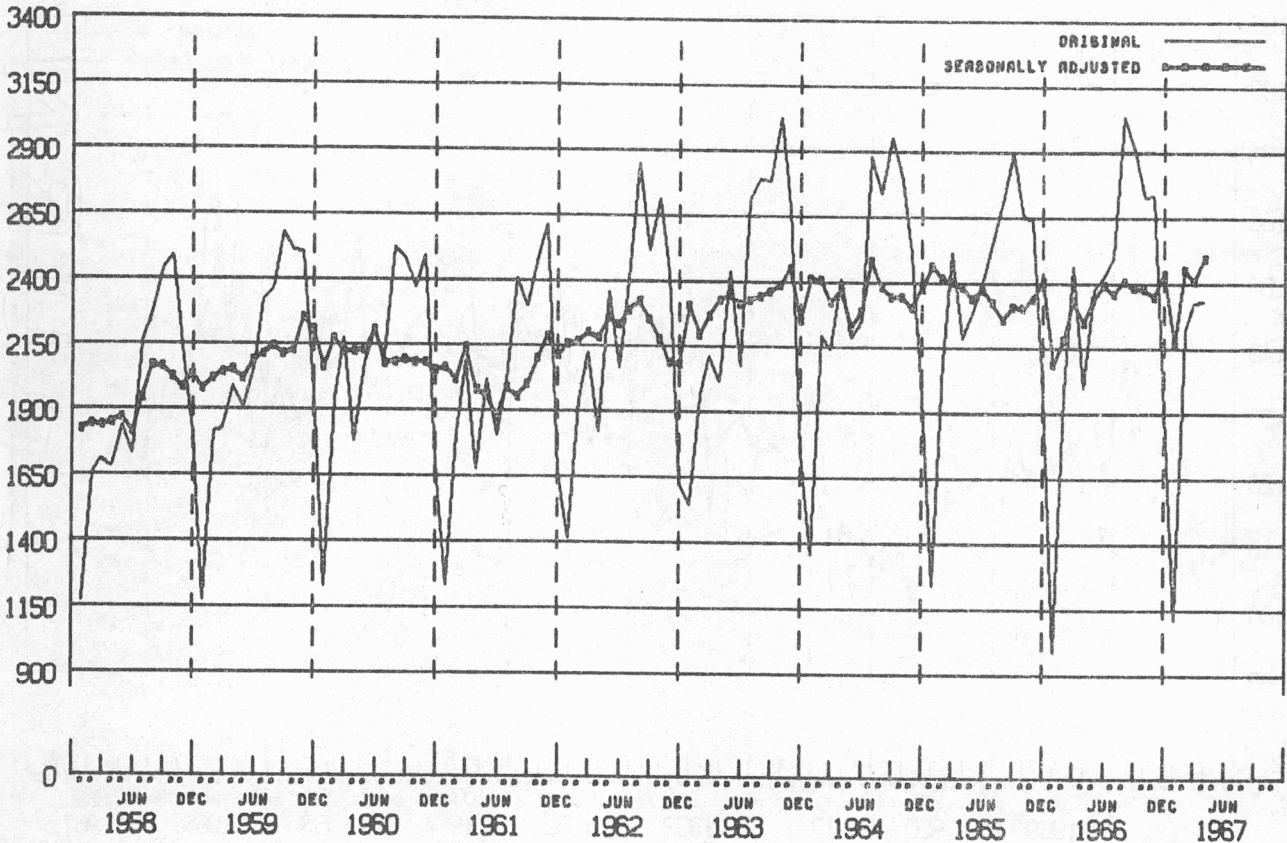
WOOLLEN AND WORSTED WOVEN CLOTH PRODUCTION  
(EXCLUDING BLANKETING)  
'000 SQ. YDS.



YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
ORIGINAL												
1958	2198	2982	2931	2562	2345	1956	2057	1960	2223	2521	2441	2109
1959	1618	2459	2553	2566	2378	2324	2343	2250	2649	2766	2857	2373
1960	1844	2681	3084	2278	2502	2562	2273	2662	2490	2515	2932	1975
1961	1630	2337	2378	1770	1867	1608	1546	1974	2104	2160	2415	1789
1962	1803	2389	2486	1931	2313	2037	2239	2449	2275	3026	2773	2025
1963	2106	2589	2576	2216	2155	1745	2036	2026	1784	2419	2202	1795
1964	1619	2140	2090	2094	1683	1806	1973	1818	2145	2196	2346	1978
1965	1343	2275	2516	1949	2034	2003	1959	2015	2143	2279	2346	1827
1966	1159	2035	2345	1636	1848	1755	1635	1787	1869	1883	2204	1582
1967	1001	1938	1999	1812	2009							
SEASONALLY ADJUSTED												
1958	2826	2768	2685	2601	2359	2176	2094	2100	2148	2230	2267	2302
1959	2221	2267	2380	2455	2497	2510	2459	2432	2495	2563	2569	2541
1960	2460	2488	2512	2491	2572	2764	2595	2598	2498	2383	2400	2262
1961	2150	2140	2049	1909	1844	1815	1768	1907	2167	1945	2016	2104
1962	2178	2182	2191	2124	2300	2367	2444	2401	2406	2560	2408	2401
1963	2504	2367	2337	2313	2200	2082	2095	2089	1851	2029	1963	2052
1964	1950	1941	1956	1979	1855	1974	1990	1975	2007	1944	2056	2036
1965	2086	2141	2058	2109	2113	2097	2085	2099	2041	2076	1958	1929
1966	1913	1845	1910	1808	1829	1871	1789	1758	1839	1725	1772	1764
1967	1546	1759	1785	1903	1872							

NOTE - ALL SEASONALLY ADJUSTED FIGURES ARE SUBJECT TO REVISION.

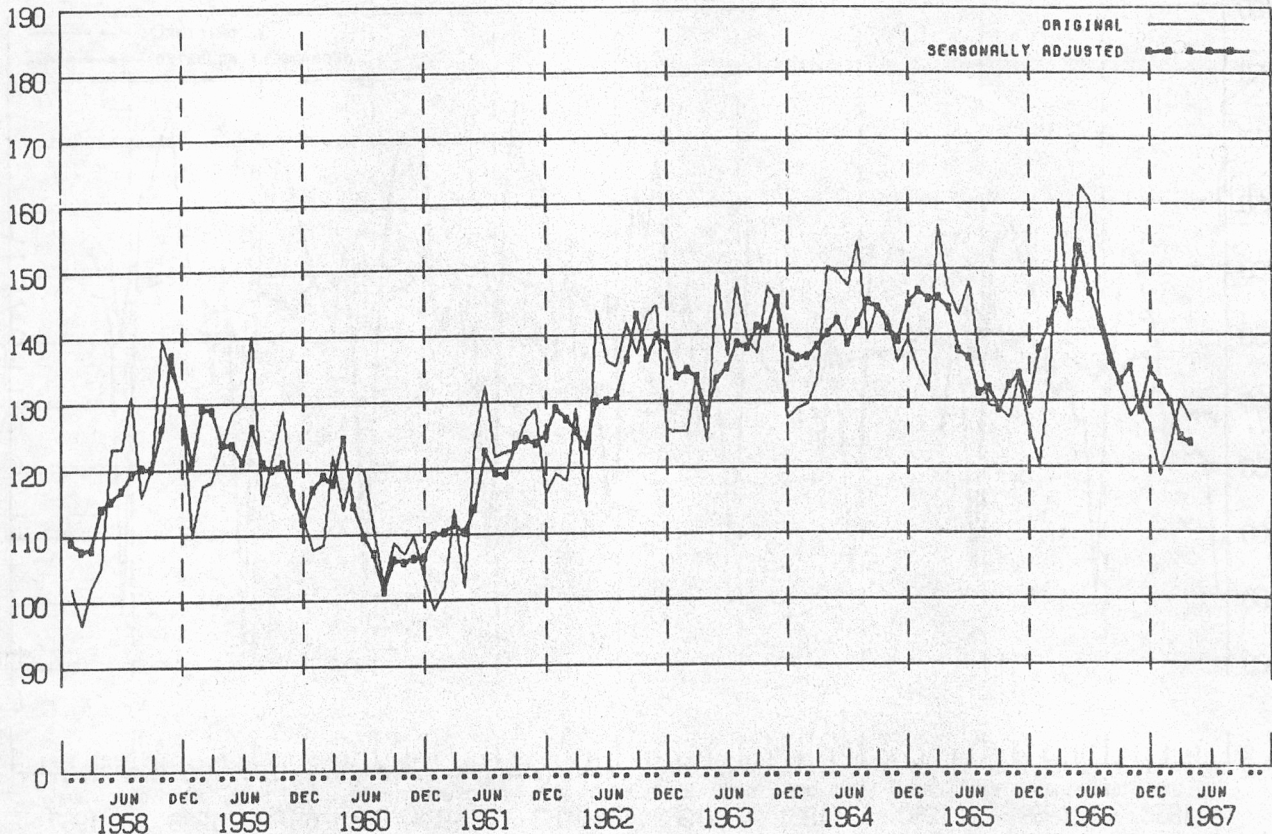
BOOTS AND SHOES PRODUCTION  
1000 PAIRS



YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
ORIGINAL												
1958	1170	1656	1710	1681	1837	1732	2156	2272	2437	2492	2139	1808
1959	1168	1815	1823	1992	1905	2056	2322	2360	2581	2508	2506	1968
1960	1223	1937	2175	1781	2080	2206	2100	2527	2483	2372	2496	1701
1961	1232	1811	2092	1676	2018	1805	2004	2411	2301	2491	2614	1671
1962	1416	1941	2123	1821	2359	2063	2398	2851	2515	2716	2436	1624
1963	1544	1961	2115	2017	2438	2073	2709	2793	2787	3032	2688	1746
1964	1356	2197	2138	2415	2186	2252	2879	2742	2953	2794	2512	1961
1965	1240	2100	2514	2186	2285	2410	2549	2705	2900	2651	2645	1974
1966	987	1978	2466	1994	2373	2423	2499	3038	2916	2728	2733	1904
1967	1108	2218	2327	2329								
SEASONALLY ADJUSTED												
1958	1826	1845	1840	1852	1868	1813	1946	2068	2066	2023	1985	2036
1959	1978	2020	2045	2055	2018	2091	2116	2143	2116	2129	2255	2212
1960	2063	2174	2123	2123	2132	2212	2081	2085	2097	2083	2085	2056
1961	2063	2019	2147	1980	1960	1876	1990	1954	2006	2103	2191	2116
1962	2162	2168	2205	2184	2260	2234	2292	2326	2255	2180	2091	2083
1963	2309	2196	2269	2330	2351	2314	2331	2345	2366	2389	2453	2256
1964	2415	2409	2326	2368	2232	2292	2487	2384	2343	2347	2303	2380
1965	2463	2421	2403	2384	2340	2375	2324	2258	2311	2306	2340	2412
1966	2088	2187	2336	2249	2340	2396	2359	2411	2387	2381	2349	2442
1967	2170	2453	2410	2498								

NOTE - ALL SEASONALLY ADJUSTED FIGURES ARE SUBJECT TO REVISION.

MEAT PRODUCTION  
'000 TONS

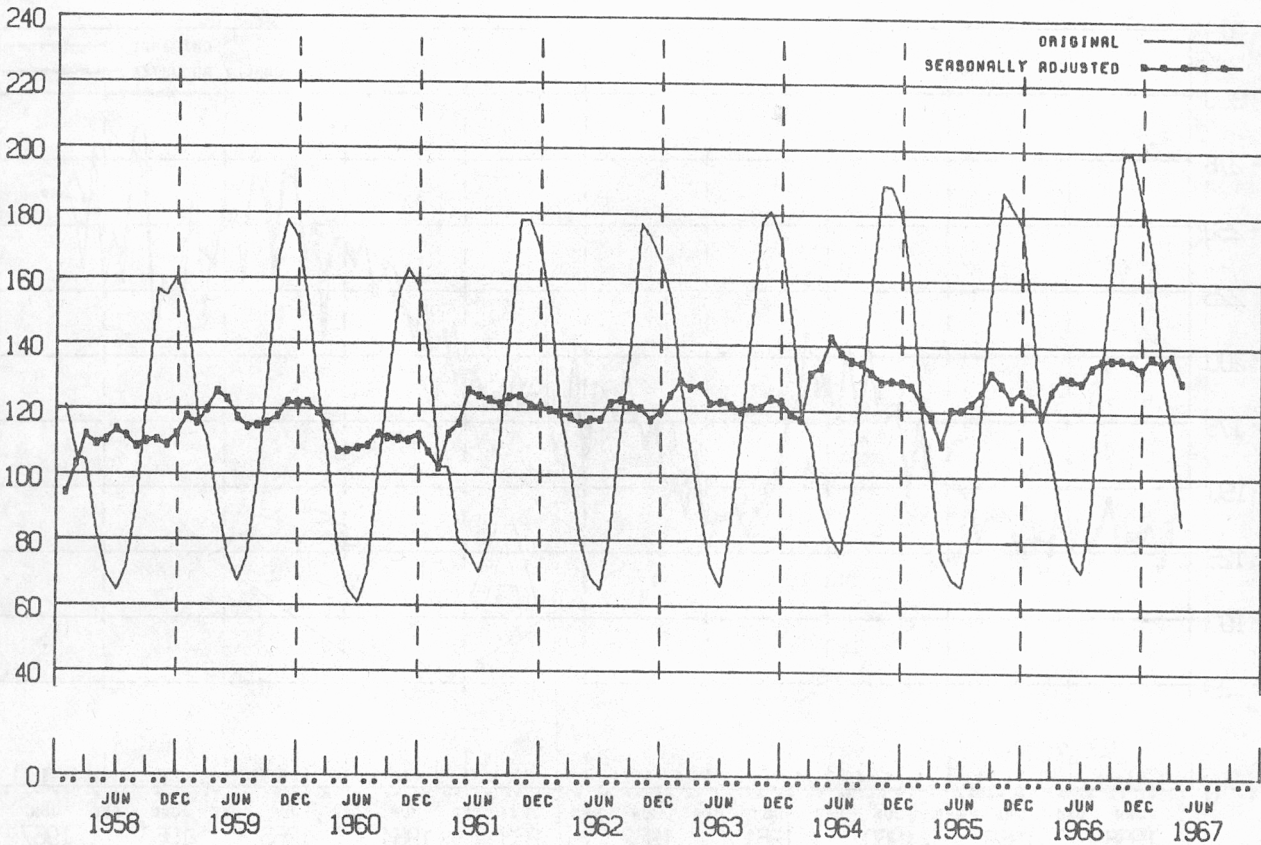


YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
ORIGINAL												
1958	102.0	96.5	102.0	105.0	123.1	123.2	131.2	115.9	120.3	139.9	135.3	130.8
1959	109.9	117.4	118.2	123.4	128.5	130.0	140.3	114.9	121.7	128.9	115.9	112.8
1960	107.5	108.3	122.0	113.6	120.1	119.8	111.1	102.2	108.8	106.9	109.8	103.3
1961	98.4	101.9	113.7	101.8	124.2	132.4	121.6	122.3	122.8	127.2	128.8	115.9
1962	119.2	118.0	128.9	114.0	143.8	135.9	135.3	141.8	137.3	143.0	144.6	125.5
1963	125.3	125.3	134.1	123.7	149.2	136.7	148.0	139.4	137.1	147.4	144.9	127.1
1964	128.8	129.6	133.1	150.4	149.3	147.4	154.1	139.3	144.3	142.1	135.7	139.4
1965	134.5	131.3	156.7	146.8	142.9	148.0	137.5	129.3	128.9	127.4	133.6	125.7
1966	120.1	134.2	160.6	142.4	163.0	160.6	143.3	137.5	132.0	127.5	129.7	125.9
1967	118.5	123.1	130.2	126.9								
SEASONALLY ADJUSTED												
1958	109.3	107.8	108.0	114.3	115.4	117.1	119.4	120.3	120.2	126.4	137.4	129.7
1959	120.8	129.5	129.0	123.9	123.8	121.3	126.4	121.1	119.9	120.9	116.6	112.0
1960	116.9	118.9	117.8	124.6	114.4	109.7	107.2	101.5	106.2	105.8	106.5	106.6
1961	110.1	110.4	111.6	110.5	113.9	122.5	119.5	119.0	123.6	124.4	123.8	125.0
1962	128.9	127.3	125.7	123.4	130.0	130.2	130.6	136.3	143.2	136.6	140.0	138.6
1963	133.8	134.8	133.9	128.1	133.3	135.2	138.8	138.2	141.4	141.0	145.5	138.0
1964	136.7	136.8	138.3	140.3	142.5	138.9	142.0	145.1	144.3	141.3	139.1	144.9
1965	146.8	145.5	145.7	144.2	137.8	136.7	131.4	132.1	128.9	132.6	134.2	130.0
1966	138.0	142.0	146.0	143.4	153.4	146.7	142.1	135.9	133.1	135.2	128.6	134.9
1967	132.6	129.8	124.5	123.8								

NOTE - ALL SEASONALLY ADJUSTED FIGURES ARE SUBJECT TO REVISION.



WHOLE MILK PRODUCTION, ALL PURPOSES  
MILLION GALLONS

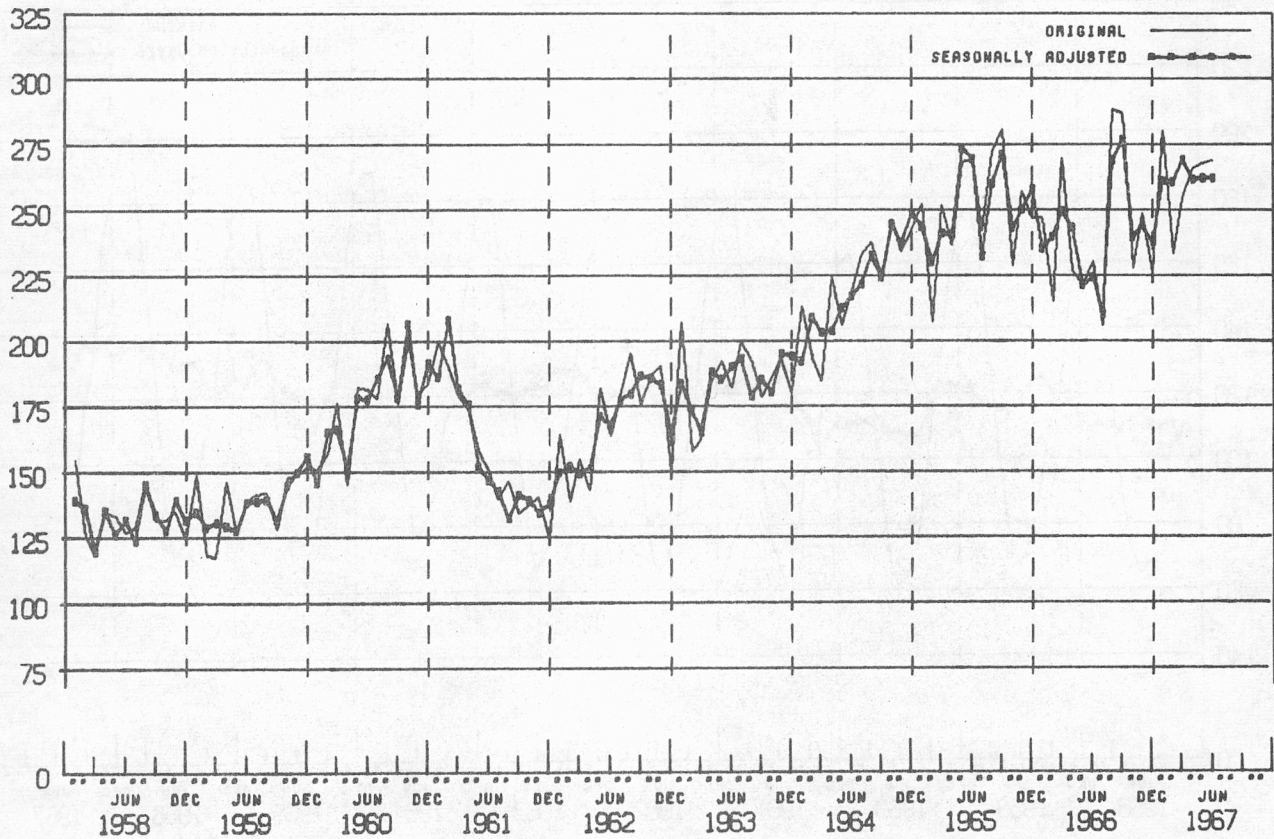


YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
ORIGINAL												
1958	120.5	105.2	104.3	81.9	69.3	64.4	71.7	91.7	124.6	156.6	154.6	160.4
1959	148.3	117.5	111.3	91.3	75.2	67.1	74.2	98.1	132.2	165.9	177.8	172.5
1960	151.8	125.2	105.9	77.0	65.3	60.7	69.6	100.5	128.8	155.7	163.1	157.7
1961	133.8	102.4	102.3	79.7	76.1	69.8	79.1	109.5	143.5	178.0	177.8	168.9
1962	151.0	118.1	103.6	80.5	68.8	64.9	80.6	113.6	139.8	177.1	172.9	165.5
1963	154.3	127.5	109.1	89.5	71.9	66.1	82.6	111.4	143.5	177.7	181.0	171.8
1964	148.2	117.8	112.4	91.7	81.6	76.5	92.1	125.2	159.1	189.2	188.8	180.0
1965	155.2	118.8	101.5	75.7	68.8	66.5	82.6	119.9	158.6	187.7	182.9	177.1
1966	149.3	114.4	106.3	88.6	75.3	70.6	89.6	131.8	165.8	199.1	199.2	184.9
1967	168.2	130.2	116.3	85.5								
SEASONALLY ADJUSTED												
1958	94.9	103.6	112.2	109.8	110.6	113.9	112.2	108.8	110.3	110.9	109.2	112.6
1959	118.2	116.2	120.0	125.6	123.3	117.7	114.6	115.3	116.2	118.2	122.6	122.0
1960	122.2	119.1	115.6	107.7	107.7	108.5	109.3	113.0	111.6	111.2	110.8	112.2
1961	107.2	102.3	112.6	115.9	126.1	124.6	123.2	121.9	123.8	124.2	121.5	121.3
1962	120.0	118.7	117.8	116.0	117.0	117.4	122.3	123.0	122.0	120.7	117.1	119.7
1963	124.9	129.3	127.3	128.1	122.5	122.9	122.1	120.1	121.3	121.4	123.9	123.2
1964	119.4	117.8	131.6	133.6	142.7	137.9	135.6	134.7	132.1	129.0	129.8	129.1
1965	128.1	122.5	118.3	110.1	121.0	121.0	122.9	125.9	131.9	128.4	123.9	126.2
1966	123.7	118.7	126.3	130.7	130.4	129.3	134.2	135.9	136.4	136.2	135.6	133.6
1967	137.3	135.6	137.7	129.6								

NOTE - ALL SEASONALLY ADJUSTED FIGURES ARE SUBJECT TO REVISION.



IMPORTS  
\$ MILLION

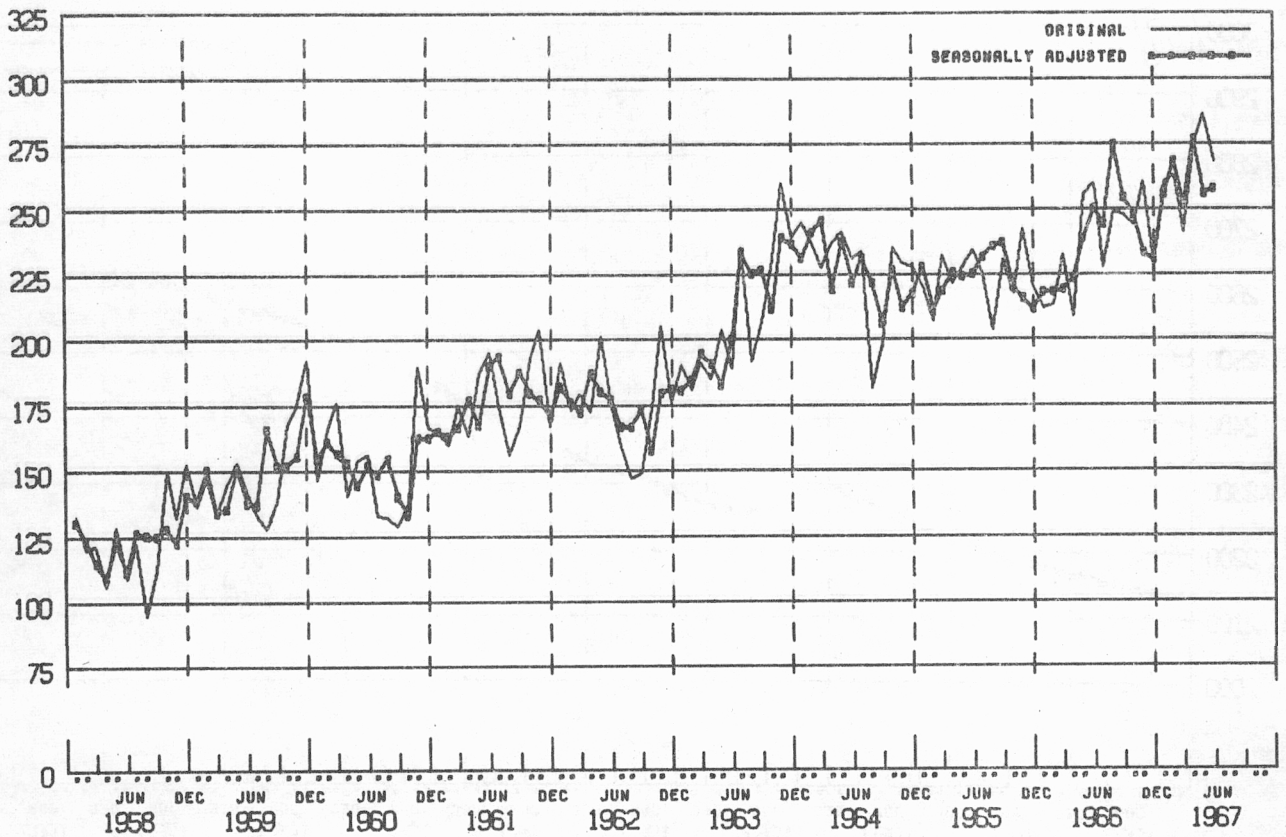


YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
ORIGINAL												
1958	154.6	125.4	119.0	134.6	133.5	126.9	128.5	145.9	131.4	131.3	135.0	124.7
1959	148.8	117.9	117.7	146.4	126.4	139.1	141.7	141.9	127.8	148.1	148.6	151.9
1960	151.0	157.1	176.6	145.2	182.5	181.7	177.9	206.9	176.2	200.4	179.5	183.3
1961	199.8	190.1	179.3	173.9	157.8	149.9	139.7	146.5	134.2	137.7	140.6	123.8
1962	164.3	138.7	155.2	142.9	182.2	163.7	178.6	195.4	175.4	187.1	190.7	149.6
1963	207.5	157.4	162.4	184.6	192.4	181.8	199.9	193.0	178.6	186.4	193.7	180.2
1964	213.4	193.5	184.4	224.4	205.9	219.3	232.3	237.8	224.7	246.6	234.0	242.6
1965	252.6	207.2	252.2	236.6	268.4	269.7	242.2	272.2	280.9	228.7	257.5	246.9
1966	246.9	214.8	270.1	227.0	221.6	230.6	205.8	288.5	286.9	227.7	249.1	226.2
1967	280.3	233.1	254.6	266.1	267.8	269.0						
SEASONALLY ADJUSTED												
1958	139.3	136.7	119.8	135.3	126.7	132.0	124.1	145.6	133.8	128.1	139.3	132.1
1959	134.8	129.0	131.2	129.4	127.9	138.5	139.1	139.3	132.1	145.1	150.1	156.0
1960	145.8	165.4	166.3	151.3	178.4	177.9	186.2	193.4	178.3	207.1	175.9	192.1
1961	186.3	208.6	182.2	176.1	152.0	147.0	143.2	132.4	141.7	139.5	134.6	138.2
1962	149.8	152.6	149.3	151.4	171.3	168.2	177.7	180.1	187.2	186.0	183.4	164.9
1963	184.0	173.6	165.7	188.7	185.3	190.7	193.7	179.1	185.5	180.3	195.7	194.5
1964	192.7	209.3	203.7	203.9	213.1	217.3	221.8	232.8	224.3	245.0	237.5	249.0
1965	244.1	230.3	241.3	241.1	274.2	269.8	232.5	260.5	271.3	243.4	250.5	258.7
1966	235.3	240.0	250.2	243.3	221.6	224.5	210.4	269.5	276.9	240.1	244.4	238.2
1967	261.7	261.2	269.6	261.9	262.4	262.5						

NOTE - ALL SEASONALLY ADJUSTED FIGURES ARE SUBJECT TO REVISION.

11.

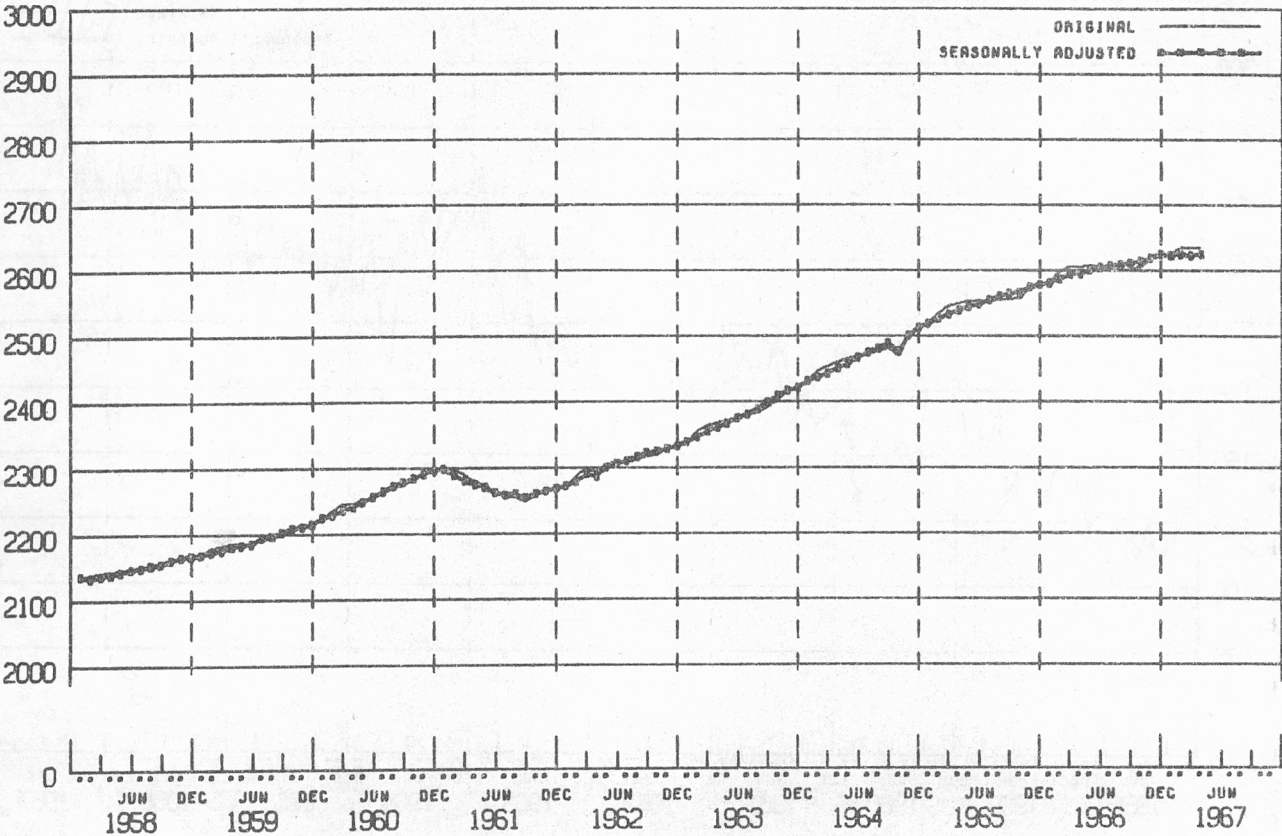
EXPORTS  
\$ MILLION



YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
ORIGINAL												
1958	133.2	119.9	122.2	106.0	129.0	109.2	123.1	95.1	112.5	150.2	132.7	152.8
1959	136.5	147.3	133.0	144.6	153.4	141.7	133.3	127.9	138.7	167.9	174.9	192.7
1960	146.5	165.9	176.3	140.5	154.1	156.7	133.0	132.6	129.1	138.2	190.1	167.2
1961	165.1	159.8	175.7	163.5	187.7	195.5	174.9	156.2	167.1	192.8	203.9	167.1
1962	191.5	172.9	179.4	172.6	201.7	174.4	159.5	147.0	149.0	174.1	205.5	176.1
1963	190.6	181.0	191.4	184.8	203.9	188.8	235.3	191.7	206.6	231.1	260.0	238.8
1964	245.1	236.3	227.7	237.2	241.5	231.0	234.1	181.5	198.6	235.4	229.6	228.0
1965	220.7	207.2	232.4	221.3	227.9	234.7	225.3	203.3	230.3	217.3	242.7	220.2
1966	211.8	213.7	232.3	208.7	255.4	260.0	227.3	248.9	246.1	243.9	260.4	228.5
1967	260.1	262.8	240.9	273.3	286.5	268.0						
SEASONALLY ADJUSTED												
1958	131.2	124.1	115.3	110.0	122.6	112.0	127.1	126.2	125.6	128.6	123.0	141.2
1959	139.2	151.2	134.3	136.0	151.7	138.2	137.5	166.7	152.7	152.4	155.8	179.0
1960	155.0	161.5	157.2	153.4	145.0	152.7	149.0	155.0	140.4	133.3	163.2	163.0
1961	165.6	163.3	166.8	177.7	168.1	190.4	194.0	179.8	187.9	180.0	177.3	171.1
1962	182.3	176.6	172.5	187.6	180.7	177.4	167.2	166.9	173.7	158.0	179.8	181.3
1963	180.9	185.1	194.8	190.8	183.1	200.5	234.1	225.3	227.2	211.9	239.7	236.8
1964	231.7	241.7	245.8	219.7	238.1	222.2	231.5	222.2	206.4	227.0	212.7	218.2
1965	227.8	212.2	218.9	226.2	224.3	225.7	231.8	236.2	237.3	220.5	216.2	212.0
1966	218.3	218.7	219.6	223.4	239.0	250.4	244.3	275.0	254.3	247.8	233.7	230.9
1967	255.8	268.4	251.7	277.1	255.9	258.0						

NOTE - ALL SEASONALLY ADJUSTED FIGURES ARE SUBJECT TO REVISION.

WAGE AND SALARY EARNERS IN CIVILIAN EMPLOYMENT (A) - MALES  
'000



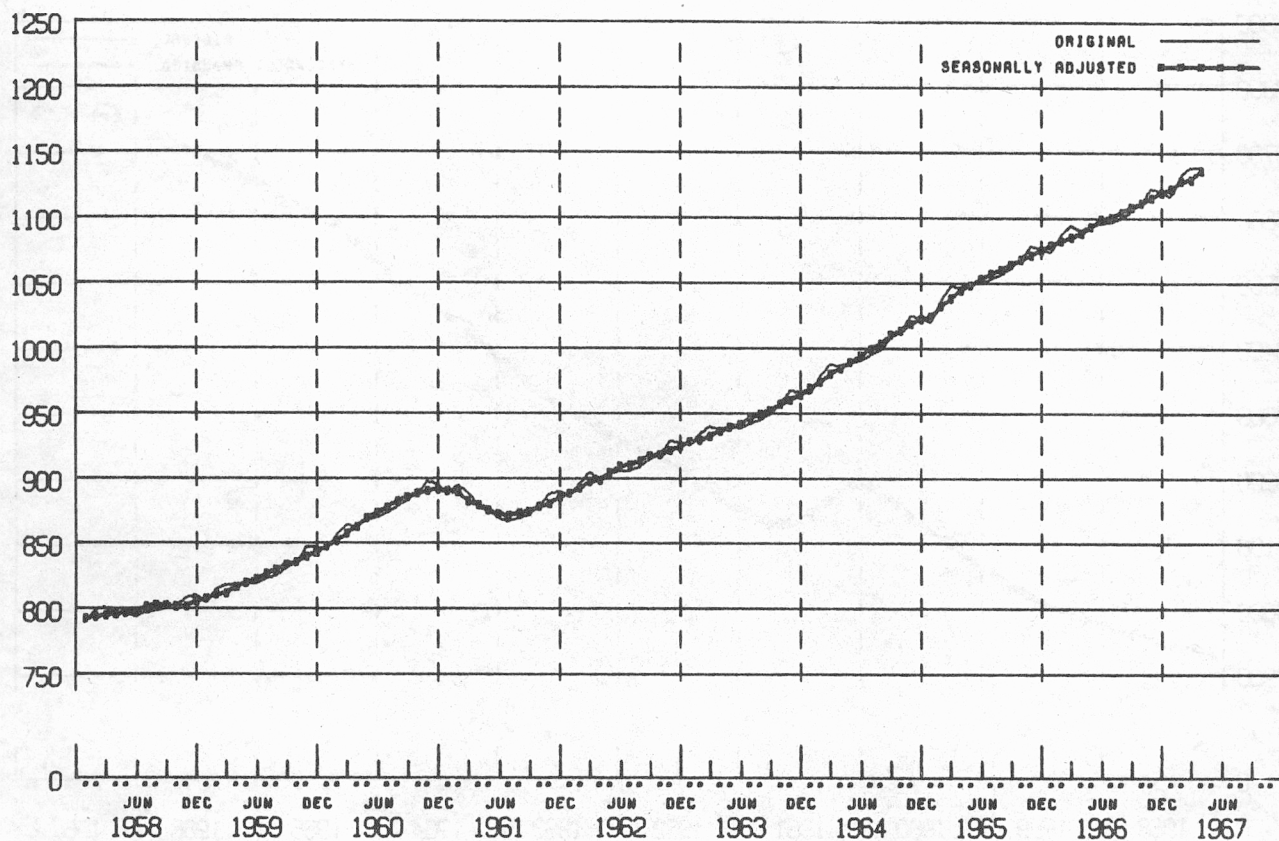
YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
ORIGINAL												
1958	2133.4	2139.1	2142.9	2143.6	2145.2	2147.9	2148.9	2149.5	2153.2	2158.1	2168.5	2164.5
1959	2168.3	2179.8	2182.9	2186.5	2186.6	2185.6	2192.2	2193.4	2200.6	2205.4	2215.1	2213.4
1960	2224.7	2236.4	2245.8	2245.1	2251.3	2256.8	2261.1	2269.3	2275.5	2282.0	2293.6	2294.6
1961	2300.1	2298.3	2289.7	2280.8	2275.0	2264.3	2256.1	2255.1	2250.48	2258.0	2268.2	2267.4
1962	2272.2	2288.1	2299.5	2294.0	2305.7	2308.0	2308.2	2311.0	2317.6	2320.5	2330.8	2330.1
1963	2338.3	2355.7	2364.2	2367.8	2372.7	2376.2	2378.1	2383.2	2391.9	2402.7	2416.0	2418.9
1964	2431.2	2447.1	2454.5	2460.4	2465.0	2469.3	2472.5	2475.6	2481.7	2469.48	2498.7	2510.8
1965	2519.4	2536.8	2545.4	2549.2	2553.1	2553.1	2551.5	2555.3	2556.3	2557.5	2571.8	2576.1
1966	2581.4	2599.0	2606.8	2605.5	2608.9	2608.0	2604.0	2603.5	2602.4	2605.1	2617.2	2622.8
1967	2623.4	2635.7	2635.6	2635.7								
SEASONALLY ADJUSTED												
1958	2137.0	2134.7	2137.7	2139.9	2143.2	2147.2	2151.0	2153.6	2156.6	2161.9	2165.5	2167.9
1959	2170.6	2174.1	2176.8	2183.0	2184.8	2185.5	2195.3	2198.3	2204.7	2209.3	2212.3	2216.4
1960	2226.0	2229.6	2238.8	2241.4	2249.2	2257.1	2265.2	2275.0	2280.3	2286.2	2291.2	2297.8
1961	2301.0	2290.7	2282.0	2276.6	2272.2	2264.6	2260.6	2261.0	2255.98	2262.9	2266.7	2270.6
1962	2273.0	2280.0	2291.2	2288.9	2301.9	2307.8	2312.8	2317.1	2324.0	2326.7	2330.5	2333.7
1963	2339.3	2347.1	2355.0	2361.6	2367.7	2375.2	2382.4	2389.5	2399.4	2410.7	2417.1	2422.8
1964	2432.6	2438.0	2444.4	2452.8	2459.0	2467.5	2476.5	2482.1	2490.3	2479.08	2501.0	2514.9
1965	2520.9	2527.2	2534.4	2540.5	2546.4	2550.7	2555.2	2562.0	2565.9	2568.5	2575.1	2580.1
1966	2582.8	2589.0	2595.3	2596.0	2601.9	2605.4	2607.7	2610.2	2612.6	2616.9	2620.9	2626.6
1967	2624.8	2625.3	2623.8	2625.9								

(A) SEE EXPLANATORY NOTES.  
(B) AFFECTED BY MAJOR INDUSTRIAL DISPUTE OR TEMPORARY STAND-DOWN.  
NOTE - ALL SEASONALLY ADJUSTED FIGURES ARE SUBJECT TO REVISION.



## WAGE AND SALARY EARNERS IN CIVILIAN EMPLOYMENT (A) - FEMALES

'000



YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
ORIGINAL												
1958	790.0	798.5	801.3	796.4	796.1	794.3	797.3	798.4	799.9	801.6	808.3	809.5
1959	805.2	815.0	818.3	817.9	818.5	819.1	822.7	824.8	831.3	835.3	846.8	847.1
1960	845.5	856.8	864.0	863.0	867.9	869.7	872.7	877.6	882.6	888.0	898.2	896.4
1961	888.7	894.8	889.5	880.5	874.6	868.9	867.0	868.5	871.7	878.5	888.0	889.6
1962	886.8	897.3	904.6	900.0	903.5	905.5	906.3	909.0	914.6	919.3	928.9	927.9
1963	926.0	934.7	939.9	938.5	939.0	938.6	942.3	945.4	949.7	957.7	967.5	967.3
1964	965.8	979.5	988.2	986.9	989.2	991.4	995.4	999.2	1007.9	1013.6	1025.2	1024.0
1965	1020.2	1037.5	1047.5	1047.0	1049.0	1051.0	1053.3	1056.5	1061.9	1068.5	1079.1	1076.8
1966	1074.0	1087.6	1094.7	1091.4	1093.6	1096.4	1097.1	1100.3	1105.0	1111.5	1122.8	1120.7
1967	1116.7	1133.5	1139.3	1139.4								
SEASONALLY ADJUSTED												
1958	792.9	794.3	795.2	795.8	797.4	798.2	801.7	802.8	802.8	802.4	802.5	805.7
1959	807.8	810.7	812.1	817.5	819.9	823.2	827.4	829.5	834.3	836.0	840.4	843.1
1960	847.8	852.2	857.6	862.5	869.5	874.2	877.8	882.7	885.7	888.6	891.3	892.4
1961	891.1	890.2	883.0	879.9	876.2	873.2	872.1	873.5	874.8	878.9	881.3	886.1
1962	889.5	892.9	897.9	899.1	904.9	909.7	911.4	914.1	917.8	919.5	922.2	925.0
1963	929.3	930.4	932.8	937.3	940.1	942.4	947.1	950.4	953.0	957.9	961.0	965.2
1964	970.0	975.3	980.7	985.2	990.0	994.9	999.9	1004.2	1011.3	1013.9	1018.7	1022.6
1965	1025.4	1033.2	1039.4	1045.0	1049.4	1054.3	1057.6	1061.5	1065.4	1068.9	1072.5	1075.9
1966	1079.9	1083.2	1086.2	1089.1	1093.8	1099.7	1101.3	1105.3	1108.6	1112.0	1116.0	1120.0
1967	1123.0	1128.9	1130.4	1136.9								

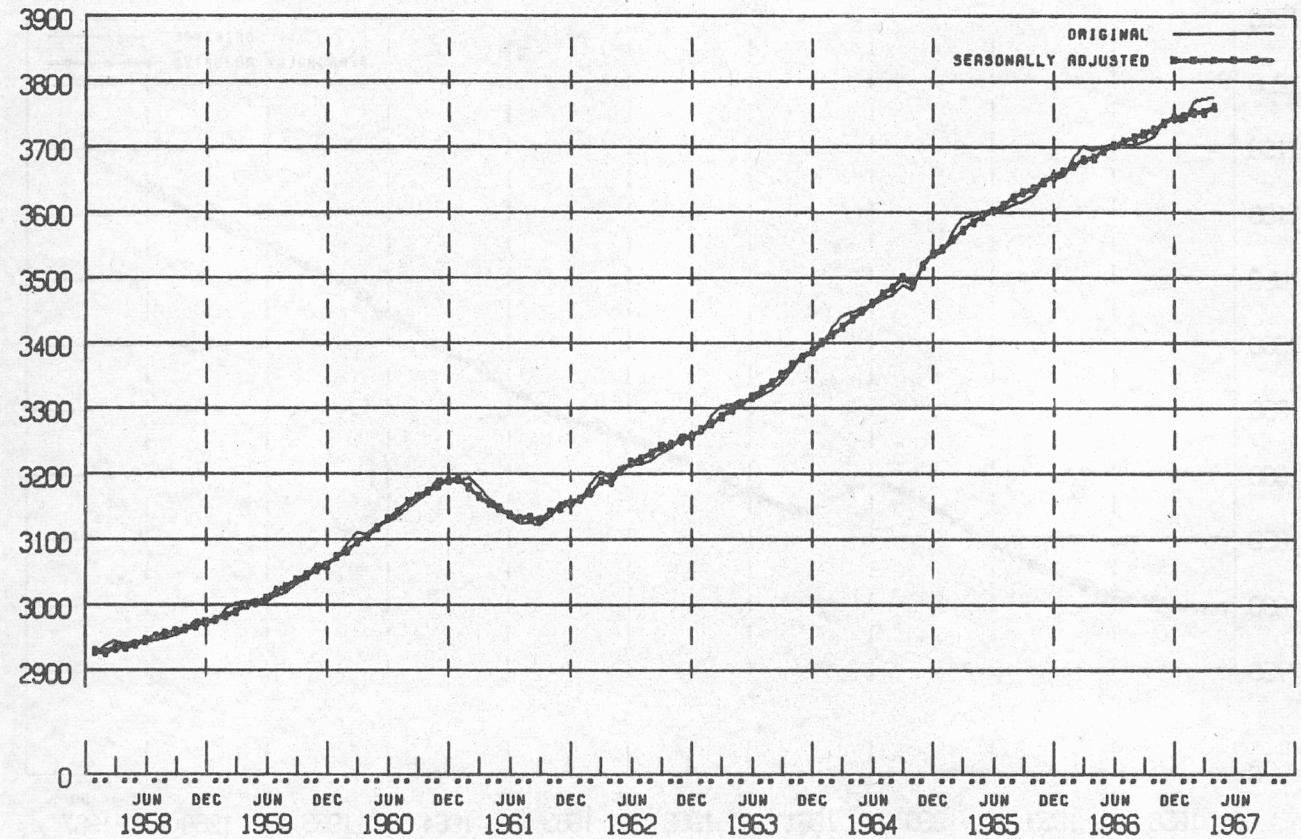
(A) SEE EXPLANATORY NOTES.

NOTE - ALL SEASONALLY ADJUSTED FIGURES ARE SUBJECT TO REVISION.



WAGE AND SALARY EARNERS IN CIVILIAN EMPLOYMENT (A) - PERSONS

'000



YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
ORIGINAL												
1958	2923.4	2937.6	2944.2	2940.0	2941.3	2942.2	2946.2	2947.9	2953.1	2959.7	2976.8	2974.0
1959	2973.5	2994.8	3001.2	3004.4	3005.1	3004.7	3014.9	3018.2	3031.9	3040.7	3061.9	3060.5
1960	3070.2	3093.2	3109.8	3108.1	3119.2	3126.5	3133.8	3146.9	3158.1	3170.0	3191.8	3191.0
1961	3188.8	3193.1	3179.2	3161.3	3149.6	3133.2	3123.1	3123.6	3122.18	3136.5	3156.2	3157.0
1962	3159.0	3185.4	3204.1	3194.0	3209.2	3213.5	3214.5	3220.0	3232.2	3239.8	3259.7	3258.0
1963	3264.3	3290.4	3304.1	3306.3	3311.7	3314.8	3320.4	3328.6	3341.6	3360.4	3383.5	3386.2
1964	3397.0	3426.6	3442.7	3447.3	3454.2	3460.7	3467.9	3474.8	3489.6	3483.08	3523.9	3534.8
1965	3539.6	3574.3	3592.9	3596.2	3602.1	3604.1	3604.8	3611.8	3618.2	3626.0	3650.9	3652.9
1966	3655.4	3686.6	3701.5	3696.9	3702.5	3704.4	3701.1	3703.8	3707.4	3716.6	3740.0	3743.5
1967	3740.1	3769.2	3774.9	3775.1								
SEASONALLY ADJUSTED												
1958	2930.0	2928.6	2933.0	2935.5	2940.5	2945.7	2952.4	2956.3	2959.3	2964.4	2968.4	2973.9
1959	2978.4	2984.3	2989.1	3000.3	3004.5	3009.2	3022.5	3027.7	3038.9	3045.4	3053.2	3059.8
1960	3073.9	3081.3	3096.7	3103.8	3118.6	3131.7	3142.8	3157.6	3166.0	3174.8	3182.9	3190.4
1961	3192.0	3180.3	3165.3	3156.4	3148.3	3138.2	3132.6	3134.5	3130.78	3141.8	3148.2	3156.8
1962	3162.4	3172.5	3189.4	3187.9	3206.8	3217.8	3224.1	3231.2	3241.9	3246.1	3252.7	3258.7
1963	3268.7	3277.3	3288.0	3298.8	3307.9	3317.6	3329.5	3339.9	3352.4	3368.5	3378.0	3387.8
1964	3402.9	3413.1	3425.3	3438.0	3449.0	3462.2	3476.4	3486.3	3501.6	3492.78	3519.7	3537.4
1965	3546.7	3560.4	3574.0	3585.4	3595.9	3604.5	3612.8	3623.4	3631.3	3637.3	3647.7	3655.8
1966	3663.4	3672.1	3681.7	3685.0	3695.7	3704.4	3709.0	3715.5	3721.3	3728.9	3737.1	3746.3
1967	3748.6	3754.2	3754.5	3762.6								

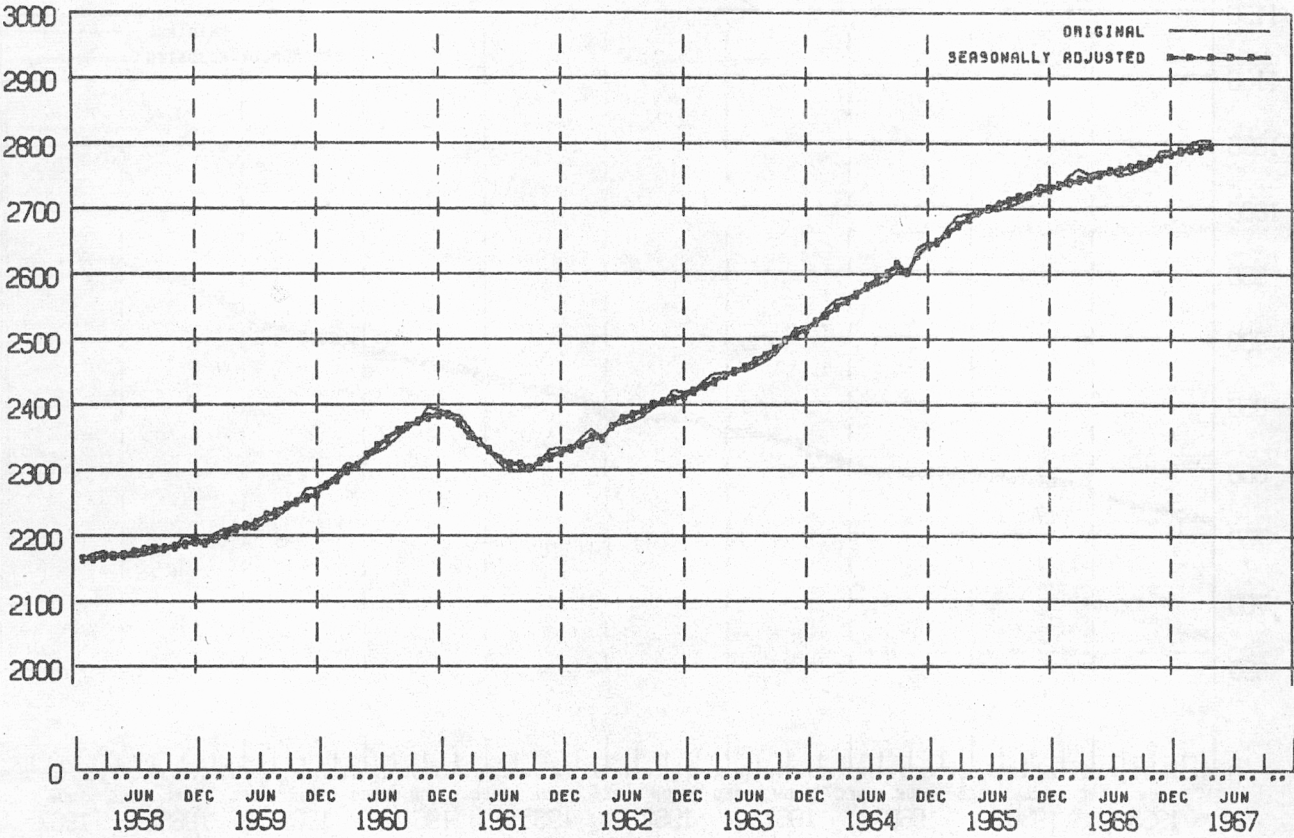
(A) SEE EXPLANATORY NOTES.

(B) AFFECTED BY MAJOR INDUSTRIAL DISPUTE OR TEMPORARY STAND-DOWN.

NOTE - ALL SEASONALLY ADJUSTED FIGURES ARE SUBJECT TO REVISION.

WAGE AND SALARY EARNERS IN CIVILIAN EMPLOYMENT (A) - PRIVATE PERSONS

'000



YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
ORIGINAL												
1958	2164.3	2172.3	2176.5	2170.1	2168.3	2167.9	2170.8	2173.6	2178.0	2184.1	2200.0	2197.9
1959	2190.8	2204.6	2210.7	2211.9	2211.3	2210.9	2221.0	2225.4	2240.2	2250.6	2271.3	2271.6
1960	2279.5	2294.7	2309.8	2308.2	2319.8	2327.6	2335.9	2350.4	2363.0	2374.9	2395.3	2393.6
1961	2386.7	2383.7	2365.7	2344.4	2328.1	2309.1	2298.0	2298.2	2298.4B	2313.2	2332.5	2334.8
1962	2333.7	2349.7	2363.9	2351.0	2365.9	2371.1	2373.1	2381.3	2395.3	2403.8	2422.3	2420.7
1963	2421.7	2438.6	2448.9	2447.6	2450.1	2452.3	2457.2	2465.8	2478.1	2497.1	2518.8	2520.9
1964	2525.8	2547.3	2562.0	2564.6	2570.9	2577.4	2584.0	2590.5	2606.3	2600.1B	2639.1	2647.9
1965	2647.1	2673.1	2689.7	2692.2	2697.3	2697.9	2697.5	2703.4	2710.4	2717.8	2737.5	2735.7
1966	2733.1	2751.1	2761.0	2754.2	2757.1	2757.2	2752.5	2754.7	2759.3	2768.1	2789.9	2789.2
1967	2783.9	2801.8	2806.5	2806.2								
SEASONALLY ADJUSTED												
1958	2166.0	2165.1	2167.9	2169.1	2171.6	2176.2	2180.0	2183.0	2182.8	2184.6	2187.2	2191.0
1959	2190.9	2196.5	2201.4	2211.6	2215.2	2220.0	2231.4	2235.5	2245.4	2251.1	2258.0	2264.0
1960	2278.6	2285.6	2299.7	2308.1	2324.1	2337.5	2347.6	2361.5	2368.8	2375.3	2381.4	2385.8
1961	2385.3	2374.0	2354.8	2344.0	2331.9	2318.3	2309.9	2309.2	2304.5B	2314.0	2319.6	2327.8
1962	2333.1	2340.1	2352.6	2349.7	2368.7	2379.3	2385.0	2392.6	2402.3	2405.2	2410.2	2414.7
1963	2422.3	2429.2	2436.7	2445.2	2451.4	2458.8	2468.6	2477.0	2485.9	2499.7	2507.8	2516.0
1964	2528.1	2538.0	2549.1	2560.4	2570.7	2582.5	2594.7	2601.7	2615.0	2604.0B	2629.1	2644.2
1965	2650.8	2663.9	2675.9	2686.6	2695.8	2701.8	2707.6	2714.6	2719.9	2722.9	2728.2	2732.6
1966	2737.8	2741.7	2746.9	2747.5	2754.8	2760.5	2762.3	2765.8	2769.4	2773.9	2780.8	2786.1
1967	2789.1	2792.2	2792.0	2799.0								

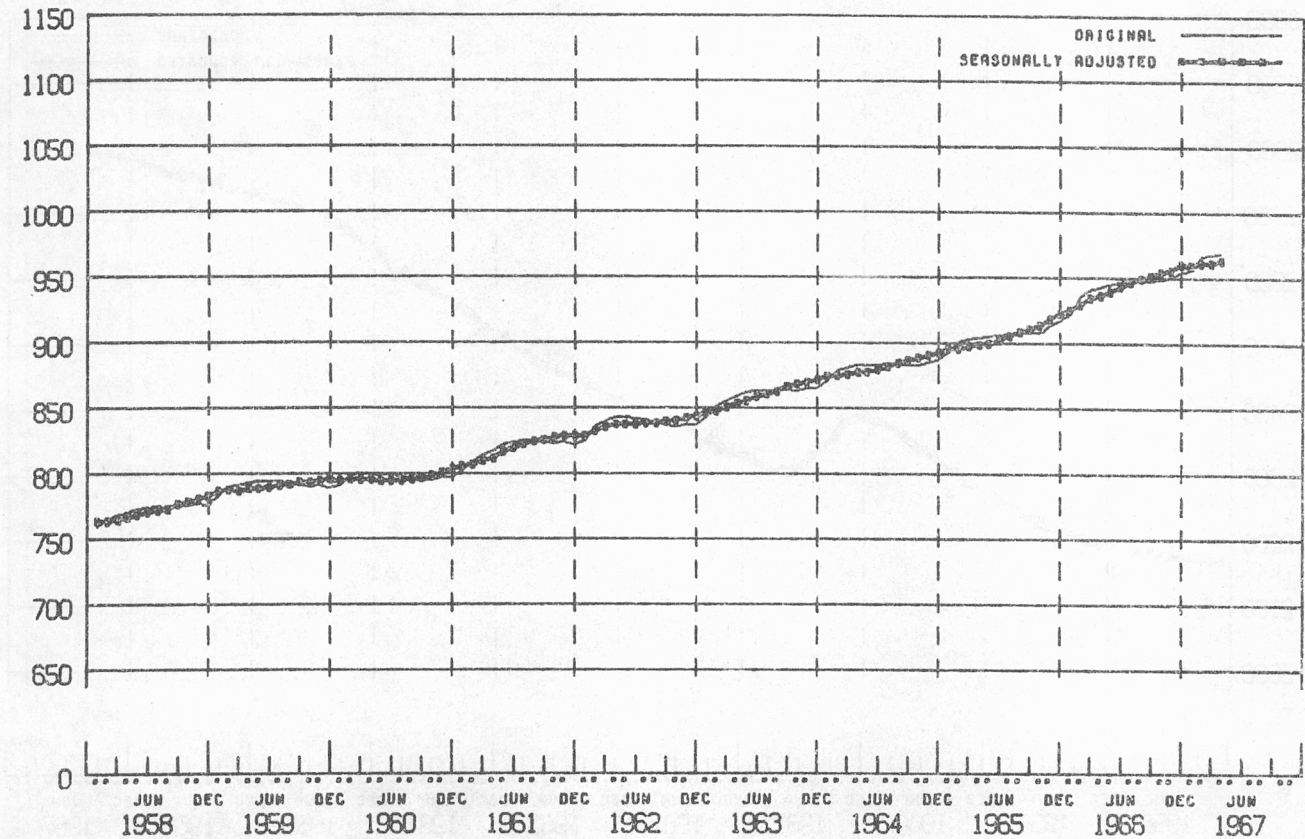
(A) SEE EXPLANATORY NOTES.

(B) AFFECTED BY MAJOR INDUSTRIAL DISPUTE OR TEMPORARY STAND-DOWN.

NOTE - ALL SEASONALLY ADJUSTED FIGURES ARE SUBJECT TO REVISION.

WAGE AND SALARY EARNERS IN CIVILIAN EMPLOYMENT (A) - GOVERNMENT PERSONS

'000



YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
ORIGINAL												
1958	759.1	765.3	767.7	769.9	773.0	774.3	775.4	774.3	775.1	775.6	776.8	776.1
1959	782.7	790.2	790.5	792.5	793.8	793.8	793.9	792.8	791.7	790.1	790.6	788.9
1960	790.7	798.5	800.0	799.9	799.4	798.9	797.9	796.5	795.1	795.1	796.5	797.4
1961	802.1	809.4	813.5	816.9	821.5	824.1	825.1	825.4	823.7	823.3	823.7	822.2
1962	825.3	835.7	840.2	843.0	843.3	842.4	841.4	838.7	836.9	836.0	837.4	837.3
1963	842.6	851.8	855.2	858.7	861.6	862.5	863.1	862.8	863.5	863.4	864.7	865.3
1964	871.2	879.3	880.7	882.7	883.3	883.3	883.9	884.3	883.3	882.9	884.8	886.9
1965	892.5	901.2	903.2	904.0	904.8	906.2	907.3	908.4	907.8	908.2	913.4	917.2
1966	922.3	935.5	940.5	942.7	945.4	947.2	948.6	949.1	948.1	948.5	950.1	954.3
1967	956.2	967.4	968.4	968.9								
SEASONALLY ADJUSTED												
1958	764.0	764.0	765.0	766.6	768.8	770.7	772.1	772.9	776.5	779.2	781.2	782.5
1959	787.4	788.4	787.3	788.9	789.3	790.0	790.9	791.9	793.6	794.1	795.2	795.5
1960	795.1	796.3	796.4	795.9	794.7	795.0	795.2	796.0	797.3	799.3	801.3	804.1
1961	806.3	806.9	809.6	812.5	816.5	820.1	822.5	825.2	826.3	828.0	828.9	829.0
1962	829.4	832.7	835.9	838.3	838.1	838.5	839.0	838.8	839.7	841.0	842.8	844.0
1963	846.6	848.3	850.5	853.8	856.4	858.7	860.9	863.0	866.6	868.8	870.3	871.9
1964	875.1	875.1	875.7	877.6	878.2	879.8	882.0	884.6	886.6	888.6	890.6	893.3
1965	896.3	896.4	897.8	898.8	899.8	902.9	905.6	908.8	911.3	914.1	919.3	923.5
1966	926.1	930.2	934.8	937.4	940.3	943.9	946.9	949.5	951.8	954.7	956.3	960.7
1967	960.1	961.7	962.5	963.6								

(A) SEE EXPLANATORY NOTES.

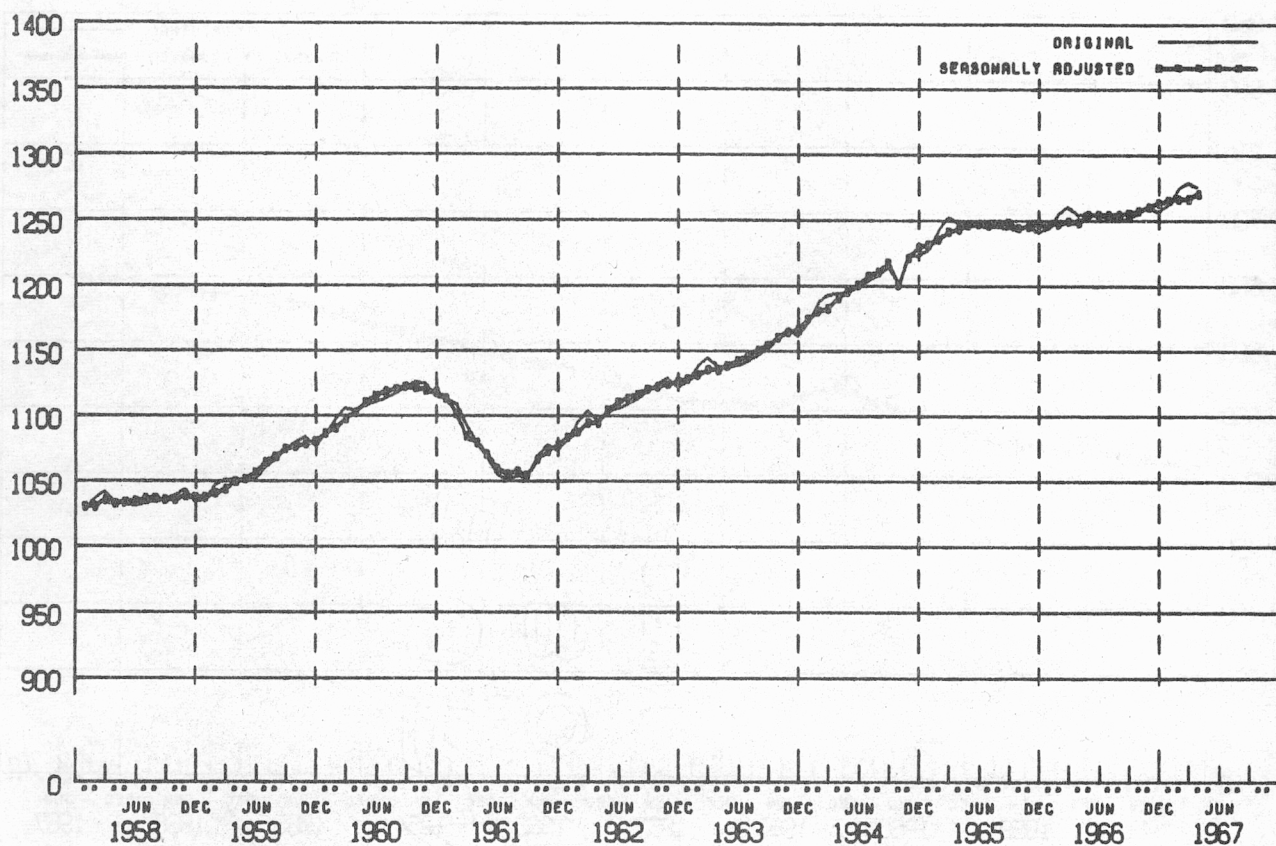
NOTE - ALL SEASONALLY ADJUSTED FIGURES ARE SUBJECT TO REVISION.



17.

## WAGE AND SALARY EARNERS IN CIVILIAN EMPLOYMENT (A) - MANUFACTURING PERSONS

'000



YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
ORIGINAL												
1958	1027.7	1037.2	1041.9	1034.2	1032.6	1030.8	1033.1	1033.6	1035.8	1038.8	1043.7	1034.2
1959	1036.0	1047.6	1050.5	1050.8	1050.3	1051.8	1060.4	1065.5	1074.0	1079.6	1084.0	1077.0
1960	1085.7	1097.6	1105.7	1103.9	1108.2	1110.7	1113.3	1117.1	1122.3	1125.6	1125.3	1114.6
1961	1112.7	1108.7	1092.8	1080.5	1068.4	1055.1	1050.9	1054.4	1053.3B	1070.1	1078.1	1073.8
1962	1082.3	1095.6	1104.0	1096.0	1103.1	1105.7	1108.7	1113.3	1119.2	1124.7	1129.0	1122.1
1963	1127.0	1139.4	1145.1	1138.0	1137.4	1139.1	1142.4	1146.9	1151.9	1161.3	1167.3	1161.6
1964	1172.0	1188.4	1192.9	1194.4	1195.1	1198.5	1204.0	1207.8	1213.8	1200.6B	1223.2	1223.1
1965	1228.4	1244.1	1252.8	1248.6	1246.4	1246.1	1244.6	1245.4	1244.3	1243.4	1246.4	1240.9
1966	1243.6	1255.6	1261.3	1254.0	1255.5	1253.7	1252.4	1252.0	1251.1	1256.0	1261.2	1256.6
1967	1261.5	1274.6	1278.5	1276.0								
SEASONALLY ADJUSTED												
1958	1030.6	1031.1	1035.7	1033.5	1034.1	1034.8	1037.1	1037.1	1036.3	1036.1	1038.9	1038.3
1959	1038.2	1041.4	1043.7	1050.3	1052.4	1056.6	1065.0	1069.3	1074.6	1076.6	1078.6	1080.9
1960	1087.5	1090.9	1098.0	1103.5	1110.9	1116.4	1118.6	1121.3	1123.2	1122.3	1119.7	1118.6
1961	1114.1	1101.7	1084.8	1079.9	1071.0	1060.4	1056.0	1058.3	1054.7B	1067.4	1073.2	1077.8
1962	1083.7	1088.4	1095.4	1094.9	1105.4	1110.5	1113.8	1117.3	1121.4	1122.8	1125.0	1126.8
1963	1128.9	1132.0	1135.7	1136.1	1139.1	1142.8	1146.8	1150.6	1154.9	1160.7	1164.5	1167.1
1964	1174.7	1180.8	1182.7	1191.4	1196.1	1201.0	1207.5	1211.2	1217.6	1201.2B	1221.7	1229.7
1965	1231.8	1236.3	1241.9	1244.4	1246.8	1247.6	1247.3	1248.5	1248.6	1245.1	1245.9	1247.9
1966	1247.5	1247.9	1250.3	1249.1	1255.5	1254.7	1254.7	1254.9	1255.7	1258.2	1261.2	1263.8
1967	1265.6	1266.8	1267.1	1270.7								

(A) SEE EXPLANATORY NOTES.

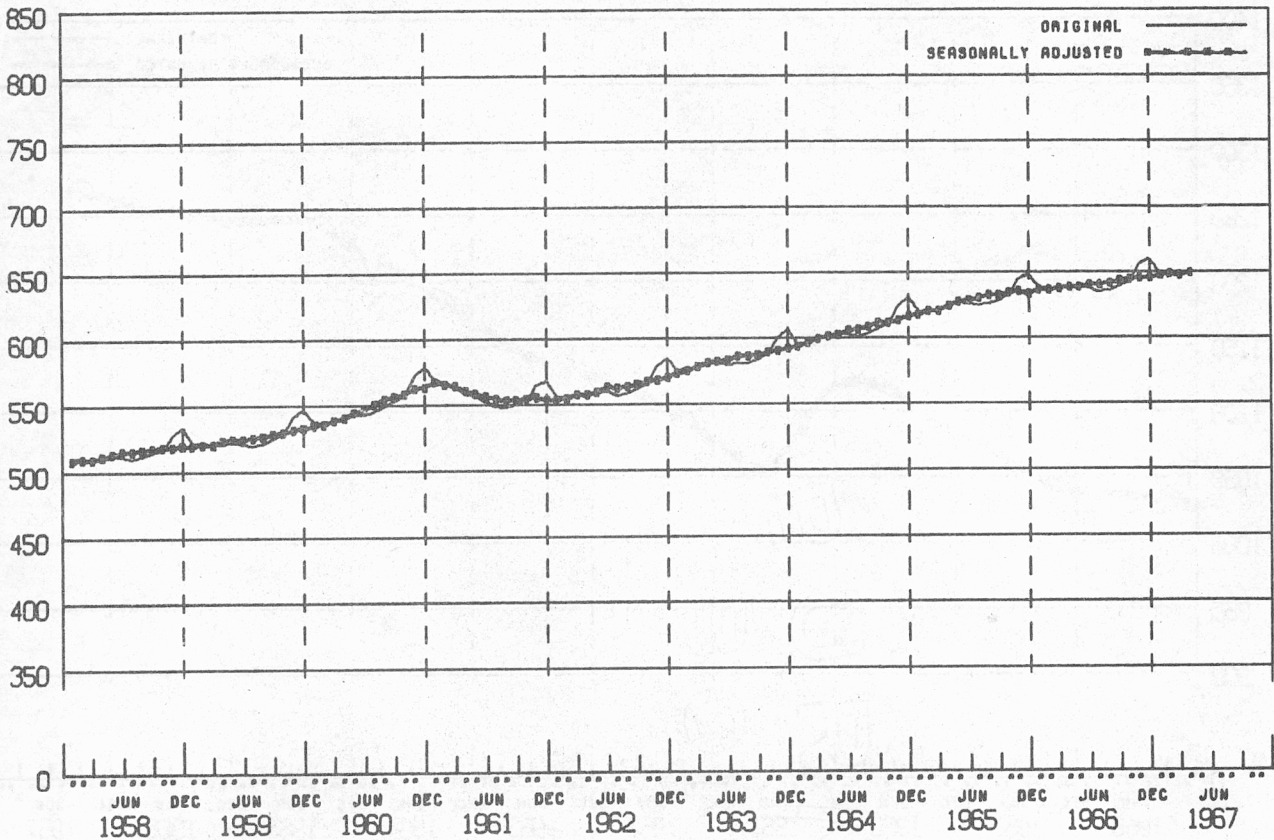
(B) AFFECTED BY MAJOR INDUSTRIAL DISPUTE OR TEMPORARY STAND-DOWN.

NOTE - ALL SEASONALLY ADJUSTED FIGURES ARE SUBJECT TO REVISION.



WAGE AND SALARY EARNERS IN CIVILIAN EMPLOYMENT (A) - COMMERCE  
PERSONS

'000

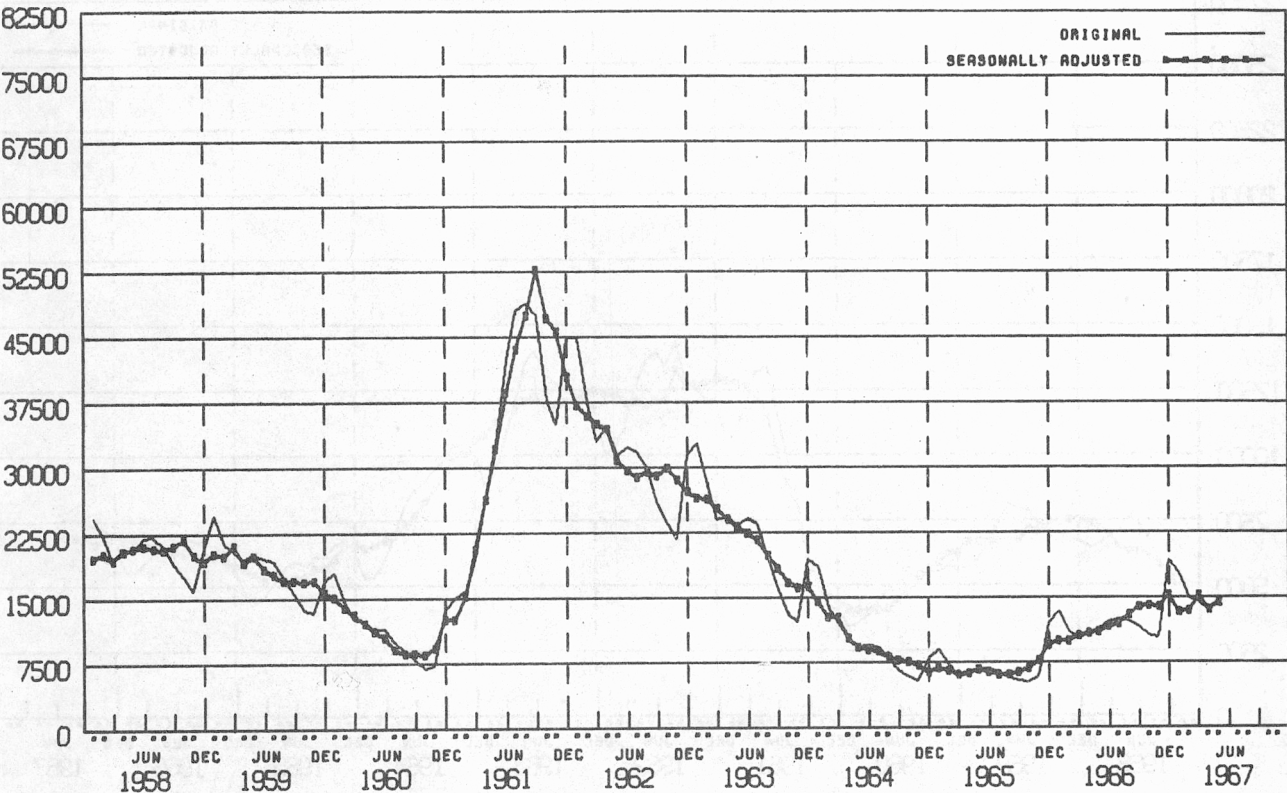


YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
ORIGINAL												
1958	511.1	510.9	509.3	509.7	512.0	511.7	510.5	511.8	514.9	517.1	527.3	534.0
1959	522.2	522.1	520.9	521.0	522.6	520.9	520.3	521.2	525.1	528.6	540.8	547.0
1960	537.8	536.6	538.8	538.7	543.1	542.7	544.5	549.0	553.2	557.4	572.3	578.5
1961	570.0	566.6	564.4	558.7	557.3	552.6	548.9	548.3	550.4	553.0	564.7	567.6
1962	556.5	555.6	557.9	555.9	558.9	559.7	556.7	558.4	562.2	566.1	578.5	584.9
1963	576.1	576.6	578.3	579.9	581.9	580.3	580.6	581.0	583.7	588.6	600.1	607.0
1964	595.5	596.7	599.6	600.3	602.6	602.9	601.3	602.7	607.0	610.8	623.5	631.2
1965	619.9	620.7	620.5	623.9	626.8	625.9	625.1	626.1	628.2	633.0	645.4	647.6
1966	638.7	636.9	637.2	637.7	638.3	638.1	635.4	635.8	638.7	643.0	655.7	660.2
1967	649.2	648.4	647.0	648.5								
SEASONALLY ADJUSTED												
1958	508.9	510.3	509.8	512.4	514.1	515.5	516.2	517.4	518.3	518.8	518.7	520.0
1959	519.9	521.5	521.3	523.7	524.5	524.8	526.3	526.9	528.6	530.3	531.8	533.0
1960	535.4	535.9	539.0	541.4	544.9	546.8	550.9	555.1	557.0	559.1	562.8	564.2
1961	567.5	566.0	564.5	561.2	558.8	556.7	555.2	554.3	554.3	554.7	555.6	554.0
1962	554.3	555.2	558.0	558.0	560.1	563.6	562.8	564.5	566.3	567.7	569.4	571.3
1963	574.1	576.5	578.5	581.7	582.9	583.8	586.6	587.2	588.0	590.3	591.0	593.3
1964	593.8	596.8	600.1	601.8	603.4	606.2	607.2	609.0	611.6	612.4	614.3	617.3
1965	618.3	621.0	621.3	625.2	627.6	628.9	631.0	632.5	632.9	634.7	635.9	633.5
1966	637.2	637.3	638.3	638.9	639.0	641.0	641.3	642.3	643.5	644.7	646.1	645.9
1967	647.7	648.8	648.2	649.7								

(A) SEE EXPLANATORY NOTES.

NOTE - ALL SEASONALLY ADJUSTED FIGURES ARE SUBJECT TO REVISION.

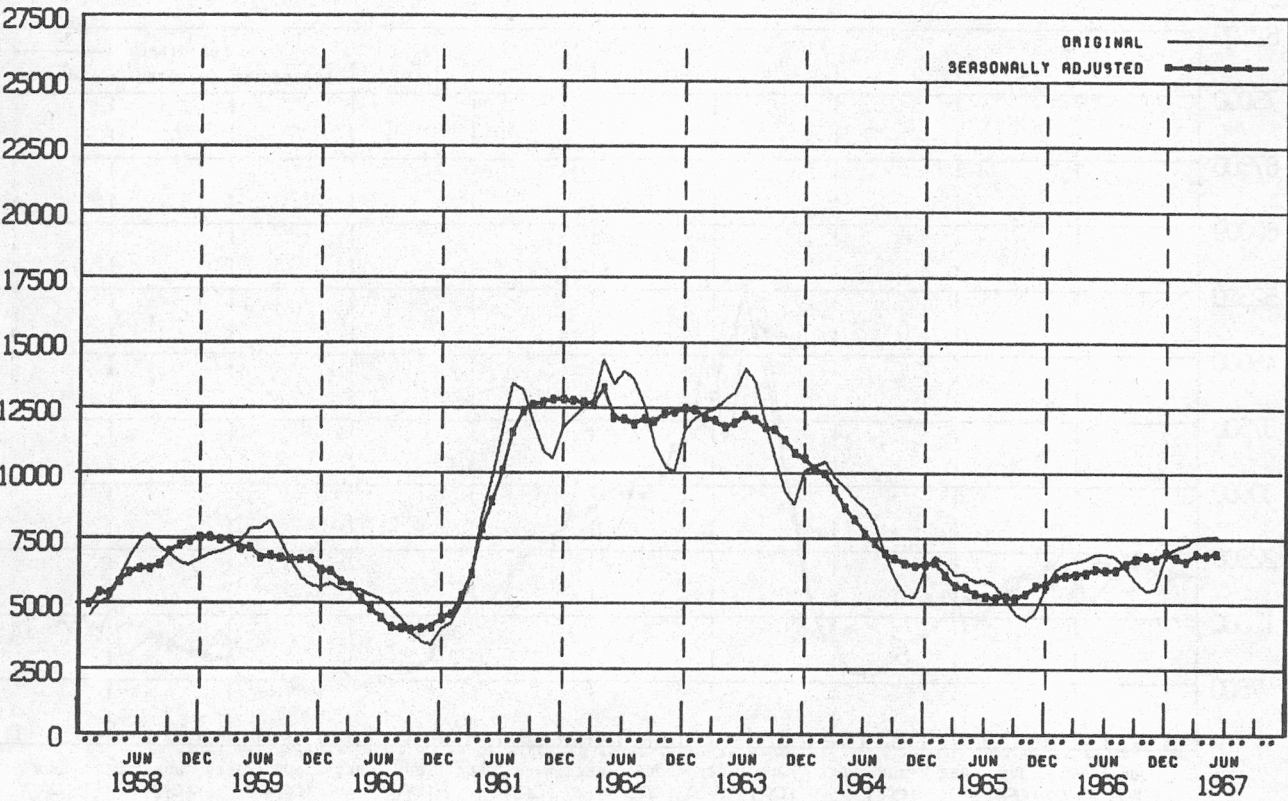
NUMBER RECEIVING UNEMPLOYMENT BENEFIT (A) - MALES  
(SOURCE OF ORIGINAL DATA - DEPARTMENT OF SOCIAL SERVICES)



YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
ORIGINAL												
1958	24273	22141	19359	20875	20552	22051	22266	21104	19098	17494	15872	20919
1959	24647	21272	20551	19471	20067	19691	19299	17532	15577	13654	13337	16890
1960	18054	14522	12562	12252	11475	11399	10078	8947	7924	6840	7236	13647
1961	14988	15854	19558	26609	32763	42479	48057	48890	47603	37675	34993	45024
1962	44976	37536	33073	34804	31278	32401	31834	30028	25764	23554	21763	31493
1963	32895	27908	23958	24334	23355	24200	23571	19864	16039	13077	12196	19440
1964	18591	13761	12089	10366	9287	9478	9314	8001	6629	5857	5386	8007
1965	9026	7168	5907	6221	6729	6753	6455	5805	5398	5273	5862	12006
1966	13301	11042	10188	10838	11187	12154	12387	12250	11718	10626	10386	19373
1967	17866	14900	14604	13436	14488							
SEASONALLY ADJUSTED												
1958	19745	20249	19506	20570	20804	21110	20834	20719	21166	21879	20053	19390
1959	20317	19990	21214	19266	19966	18384	17786	17075	17097	16941	17037	15709
1960	15096	13925	13177	12133	11294	10439	9189	8674	8709	8531	9346	12563
1961	12557	15310	20629	26364	32279	38697	43651	47515	52840	47315	45789	40554
1962	37224	36050	35062	34557	30927	29661	29013	29555	29155	30008	28696	27370
1963	26578	26436	25388	24211	23269	22452	21809	19980	18515	16832	16190	16311
1964	14601	12812	12746	10398	9255	8928	8783	8258	7793	7643	7186	6493
1965	6905	6593	6182	6283	6712	6441	6197	6118	6412	6941	7855	9543
1966	10009	10060	10639	11023	11113	11664	11999	13053	14006	14062	13941	15272
1967	13340	13524	15256	13703	14365							

(A) NUMBER ON BENEFIT AT LAST SATURDAY OF MONTH.  
NOTE - ALL SEASONALLY ADJUSTED FIGURES ARE SUBJECT TO REVISION.

NUMBER RECEIVING UNEMPLOYMENT BENEFIT (A) - FEMALES  
(SOURCE OF ORIGINAL DATA - DEPARTMENT OF SOCIAL SERVICES)



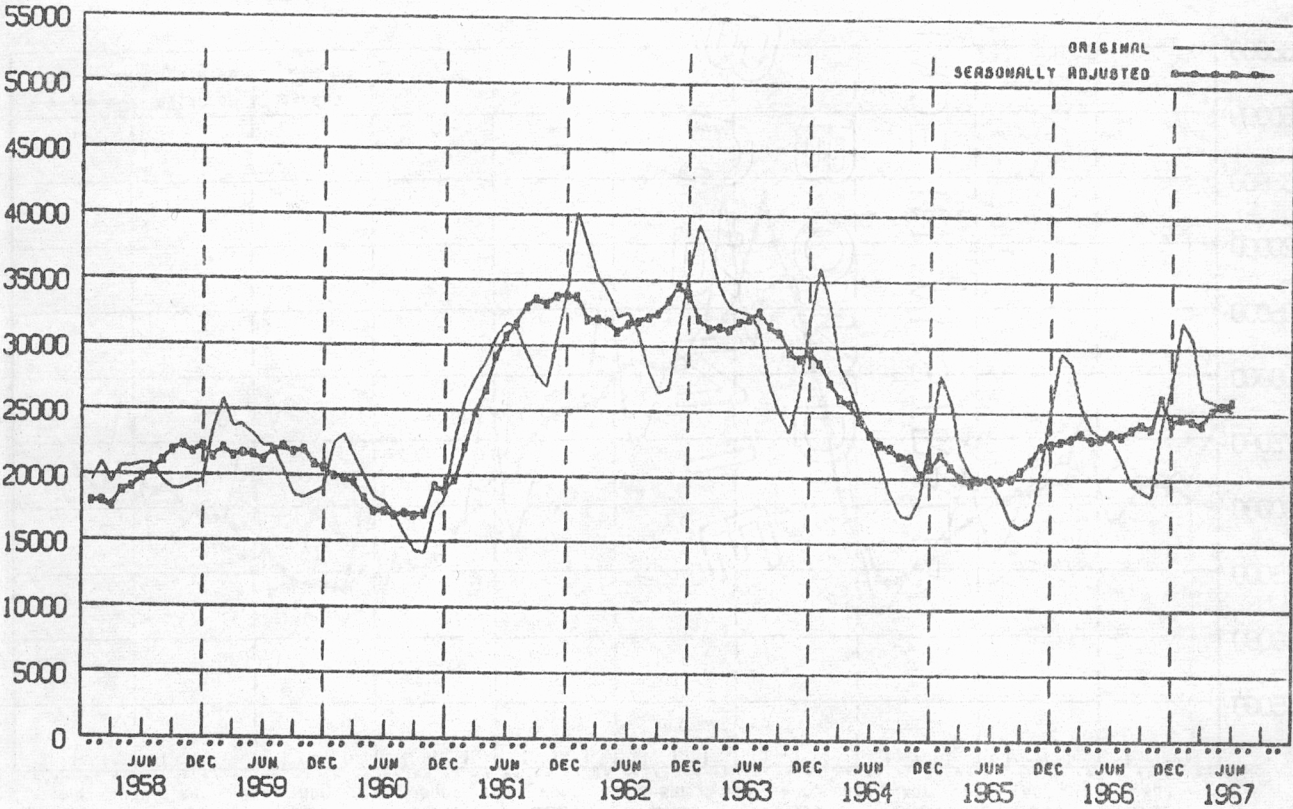
YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
ORIGINAL												
1958	4482	5022	5126	5936	6730	7367	7649	7174	6904	6543	6430	6646
1959	6839	6935	7118	7353	7857	7837	8143	7355	6586	5944	3700	5579
1960	5727	5498	5480	5480	5290	5142	4819	4384	3859	3524	3424	3986
1961	4272	5087	6088	8416	9904	11775	13442	13176	11958	10856	10552	11732
1962	12129	12556	12795	14332	13390	13923	13619	12619	11087	10242	10070	11660
1963	12114	12364	12436	12808	13124	13988	13575	12005	10536	9239	8782	10115
1964	10252	10465	9866	9463	9000	8651	8124	6923	5958	5303	5272	6301
1965	6805	6530	6097	6115	5856	5903	5682	5172	4597	4341	4654	5639
1966	6323	6569	6607	6722	6895	6904	6813	6344	5852	5496	5534	6919
1967	7160	7247	7501	7508	7523							
SEASONALLY ADJUSTED												
1958	4987	5444	5409	5833	6198	6346	6357	6524	6993	7230	7414	7529
1959	7550	7460	7434	7105	7155	6750	6860	6747	6719	6680	6683	6283
1960	6260	5851	5641	5212	4783	4427	4100	4063	3997	4047	4095	4446
1961	4597	5309	6136	7897	8948	10156	11576	12389	12665	12742	12829	12843
1962	12782	12766	12641	13310	12145	12077	11896	12100	12024	12292	12362	12499
1963	12427	12172	12045	11819	11964	12273	12093	11793	11693	11277	10808	10603
1964	10222	10010	9384	8716	8251	7697	7368	6959	6737	6551	6474	6499
1965	6617	6113	5710	5631	5392	5323	5232	5289	5260	5394	5700	5751
1966	6055	6078	6136	6187	6372	6275	6319	6541	6733	6851	6765	7024
1967	6815	6674	6950	6911	6970							

(A) - NUMBER ON BENEFIT AT LAST SATURDAY OF MONTH.  
NOTE - ALL SEASONALLY ADJUSTED FIGURES ARE SUBJECT TO REVISION.



NUMBER REGISTERED FOR EMPLOYMENT  
WITH COMMONWEALTH EMPLOYMENT SERVICE (A) - FEMALES

(SOURCE OF ORIGINAL DATA - DEPARTMENT OF LABOUR AND NATIONAL SERVICE)

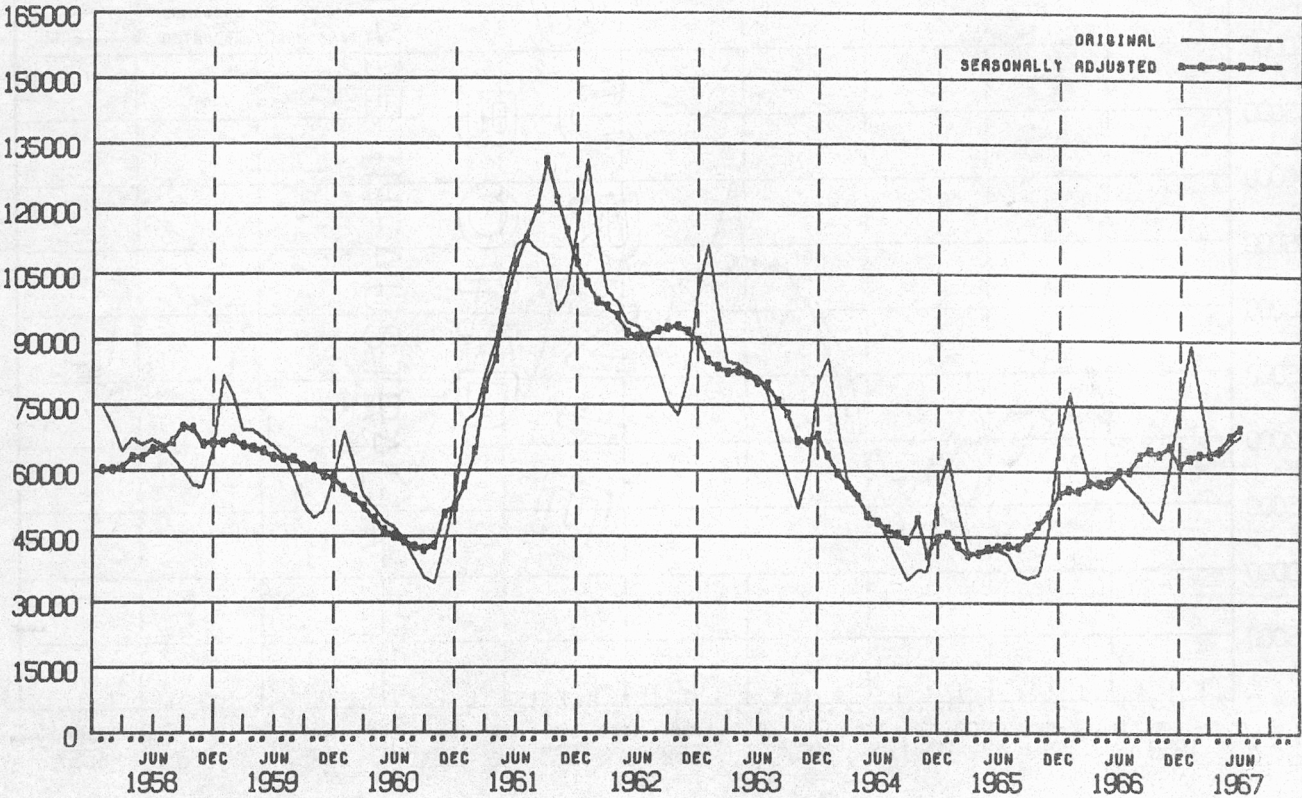


YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
ORIGINAL												
1958	19518	20946	19348	20643	20634	20801	20847	19587	18929	18851	19323	19543
1959	23539	25821	23664	23797	23067	22161	22238	20405	18529	18341	18550	18959
1960	22436	23141	21550	19905	18306	18034	17075	15612	14273	14056	17055	18164
1961	22707	25976	27390	28690	30602	31745	31413	29518	27653	26781	30211	34021
1962	40184	37672	35397	34099	32228	32516	31214	28226	26351	26651	31056	35429
1963	39305	37440	34623	33025	32748	32512	31437	27091	24898	23359	26281	31847
1964	36136	33104	28508	26907	24770	23238	21420	18757	17207	16951	18362	22886
1965	27861	25806	21933	20335	19992	19742	18641	16651	16307	16765	20409	25233
1966	29681	28842	25574	23777	23200	22954	21687	19729	19055	18674	23794	27094
1967	32136	30694	26301	26046	25727	25325						
SEASONALLY ADJUSTED												
1958	18049	17975	17605	18785	19116	19764	20285	21101	21925	22346	21811	22203
1959	21370	22142	21521	21745	21553	21184	21902	22171	21771	22006	20866	20621
1960	19974	19847	19541	18319	17283	17306	17009	17176	17030	17147	19161	18882
1961	19673	22233	24825	26593	29226	30696	31663	32998	33573	33221	33810	33885
1962	33838	31991	32124	31945	31067	31741	31911	32220	32498	33531	34600	33980
1963	32113	31378	31513	31262	31937	32123	32689	31590	31099	29637	29128	29619
1964	28801	27281	26063	25735	24381	23278	22599	22265	21677	21620	20284	20848
1965	21774	20942	20113	19582	19851	20018	19902	19986	20639	21426	22503	22744
1966	22923	23146	23505	23008	23128	23452	23308	23799	24155	23882	26234	24327
1967	24691	24500	24193	25272	25721	25965						

(A) PERSONS WHO CLAIMED WHEN REGISTERING THAT THEY WERE NOT EMPLOYED AND WHO WERE RECORDED AS UNPLACED. GENERALLY AT FRIDAY NEAREST END OF MONTH.

NOTE - ALL SEASONALLY ADJUSTED FIGURES ARE SUBJECT TO REVISION.

NUMBER REGISTERED FOR EMPLOYMENT  
WITH COMMONWEALTH EMPLOYMENT SERVICE (A) - PERSONS  
(SOURCE OF ORIGINAL DATA - DEPARTMENT OF LABOUR AND NATIONAL SERVICE)



YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
ORIGINAL												
1958	74765	70029	64406	67407	65964	67144	65913	62975	60322	56779	56452	64678
1959	81901	76926	69344	69215	67621	65708	63623	59233	52322	49077	50718	58299
1960	69032	61023	54165	51559	48606	47213	44280	39945	35623	34410	43313	53863
1961	71118	73072	81865	89367	102554	111684	113439	110701	109123	96552	100057	115936
1962	131496	112250	101093	98547	93916	93128	90091	83376	75951	72648	80934	101248
1963	111807	96042	84912	84625	82870	81407	78131	67229	58886	51693	59500	80096
1964	85809	69227	57925	54461	49780	48543	45110	39578	35166	37494	37053	54506
1965	63023	50747	41671	41014	41843	42145	41021	36585	35641	36381	45682	67859
1966	78308	65965	58304	56576	56537	59020	56823	54279	50916	48571	59877	76457
1967	88965	76254	64857	64046	66185	68491						
SEASONALLY ADJUSTED												
1958	60694	60522	60834	63166	63305	65174	65415	66972	70190	70049	66306	66738
1959	66629	67432	66029	65439	64782	63410	63120	63021	61313	60811	59222	58483
1960	55961	53988	51918	49160	46604	45383	44026	42786	42239	43102	50293	51856
1961	56967	64815	78771	85839	99136	107833	113404	120159	131462	122502	115054	107777
1962	103293	99106	97893	95694	91693	90784	91011	92321	93100	93388	92040	89930
1963	85588	84068	82782	83097	82220	80455	80214	76147	73282	67108	66846	68334
1964	63999	59793	56910	54212	50111	48669	47047	45760	44294	49132	41222	45096
1965	45911	43315	41133	41303	42717	42752	43336	42876	45274	47956	50423	54955
1966	56208	55753	57744	57566	58110	60247	60425	64046	64975	64121	65915	61712
1967	63443	64173	64344	65535	68284	70136						

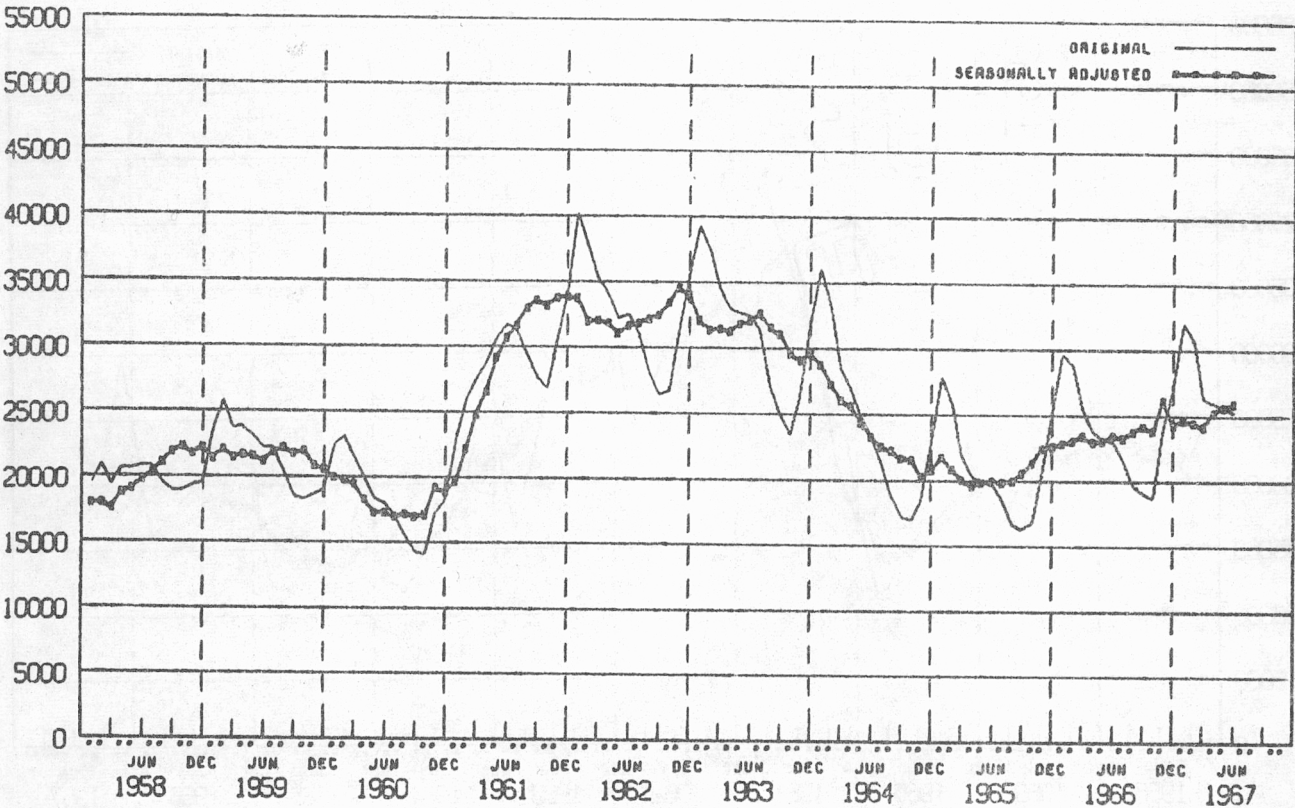
(A) PERSONS WHO CLAIMED WHEN REGISTERING THAT THEY WERE NOT EMPLOYED AND WHO WERE RECORDED AS UNPLACED. GENERALLY AT FRIDAY NEAREST END OF MONTH.

NOTE - ALL SEASONALLY ADJUSTED FIGURES ARE SUBJECT TO REVISION.



NUMBER REGISTERED FOR EMPLOYMENT  
WITH COMMONWEALTH EMPLOYMENT SERVICE (A) - FEMALES

(SOURCE OF ORIGINAL DATA - DEPARTMENT OF LABOUR AND NATIONAL SERVICE)



YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
ORIGINAL												
1958	19518	20946	19348	20643	20634	20801	20847	19587	18929	18851	19323	19543
1959	23539	25821	23664	23797	23067	22161	22238	20405	18529	18341	18550	18959
1960	22436	23141	21550	19905	18306	18034	17075	15612	14273	14056	17055	18164
1961	22707	25976	27390	28690	30602	31745	31413	29518	27653	26781	30211	34021
1962	40184	37672	35397	34099	32228	32516	31214	28226	26351	26651	31056	35429
1963	39305	37440	34623	33025	32748	32512	31437	27091	24898	23359	26281	31847
1964	36136	33104	28508	26907	24770	23238	21420	18757	17207	16951	18362	22886
1965	27861	25806	21933	20335	19992	19742	18641	16651	16307	16765	20409	25233
1966	29681	28842	25574	23777	23200	22954	21687	19729	19055	18674	23794	27094
1967	32136	30694	26301	26046	25727	25325						
SEASONALLY ADJUSTED												
1958	18049	17975	17605	18785	19116	19764	20285	21101	21925	22346	21811	22203
1959	21370	22142	21521	21745	21553	21184	21902	22171	21771	22006	20866	20621
1960	19974	19847	19541	18319	17283	17306	17009	17176	17030	17147	19161	18862
1961	19673	22233	24825	26593	29226	30696	31663	32998	33573	33221	33810	33885
1962	33838	31991	32124	31945	31067	31741	31911	32220	32498	33531	34600	33980
1963	32113	31378	31513	31262	31937	32123	32689	31590	31099	29637	29128	29619
1964	28801	27281	26063	25735	24381	23278	22599	22265	21677	21620	20284	20848
1965	21774	20942	20113	19582	19851	20018	19902	19986	20639	21426	22503	22744
1966	22923	23146	23505	23008	23128	23452	23308	23799	24155	23882	26234	24327
1967	24691	24500	24193	25272	25721	25965						

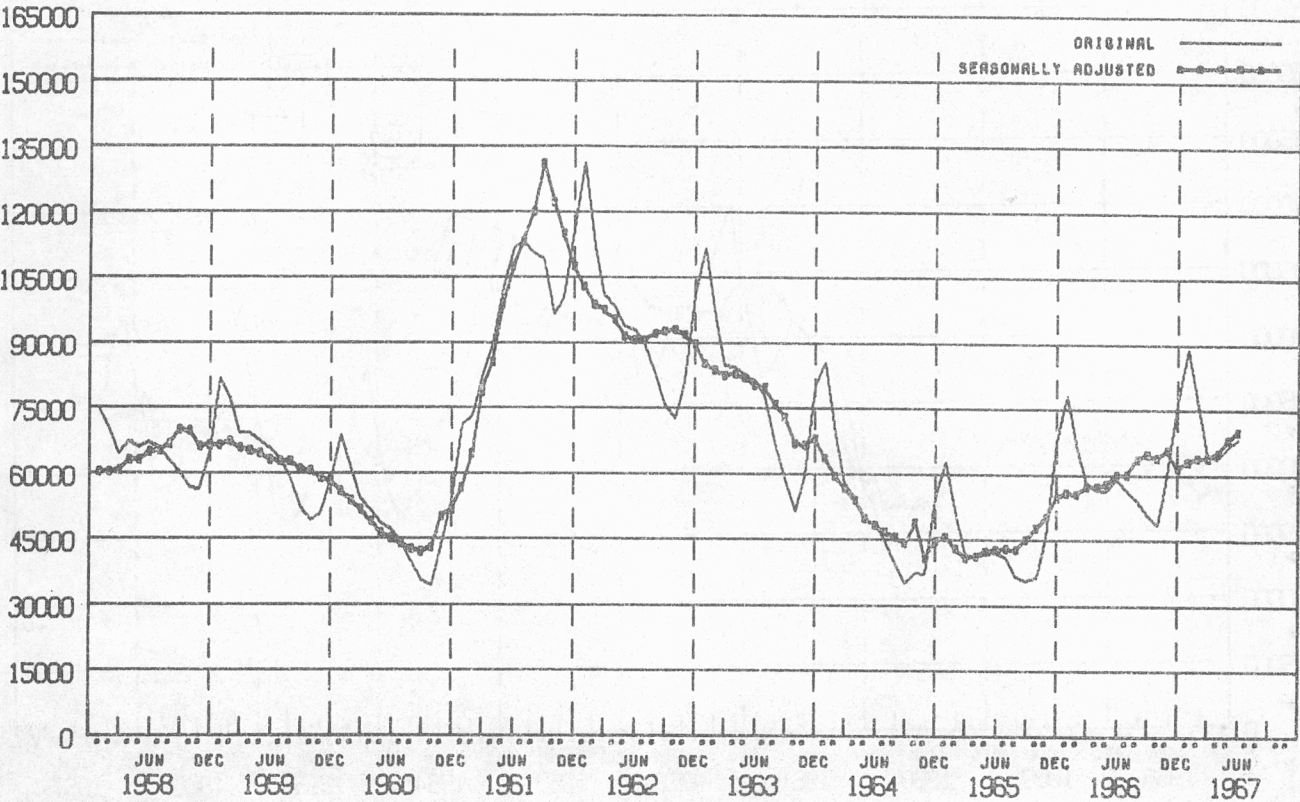
(A) PERSONS WHO CLAIMED WHEN REGISTERING THAT THEY WERE NOT EMPLOYED AND WHO WERE RECORDED AS UNPLACED. GENERALLY AT FRIDAY NEAREST END OF MONTH.

NOTE - ALL SEASONALLY ADJUSTED FIGURES ARE SUBJECT TO REVISION.



NUMBER REGISTERED FOR EMPLOYMENT  
WITH COMMONWEALTH EMPLOYMENT SERVICE (A) - PERSONS

(SOURCE OF ORIGINAL DATA - DEPARTMENT OF LABOUR AND NATIONAL SERVICE)

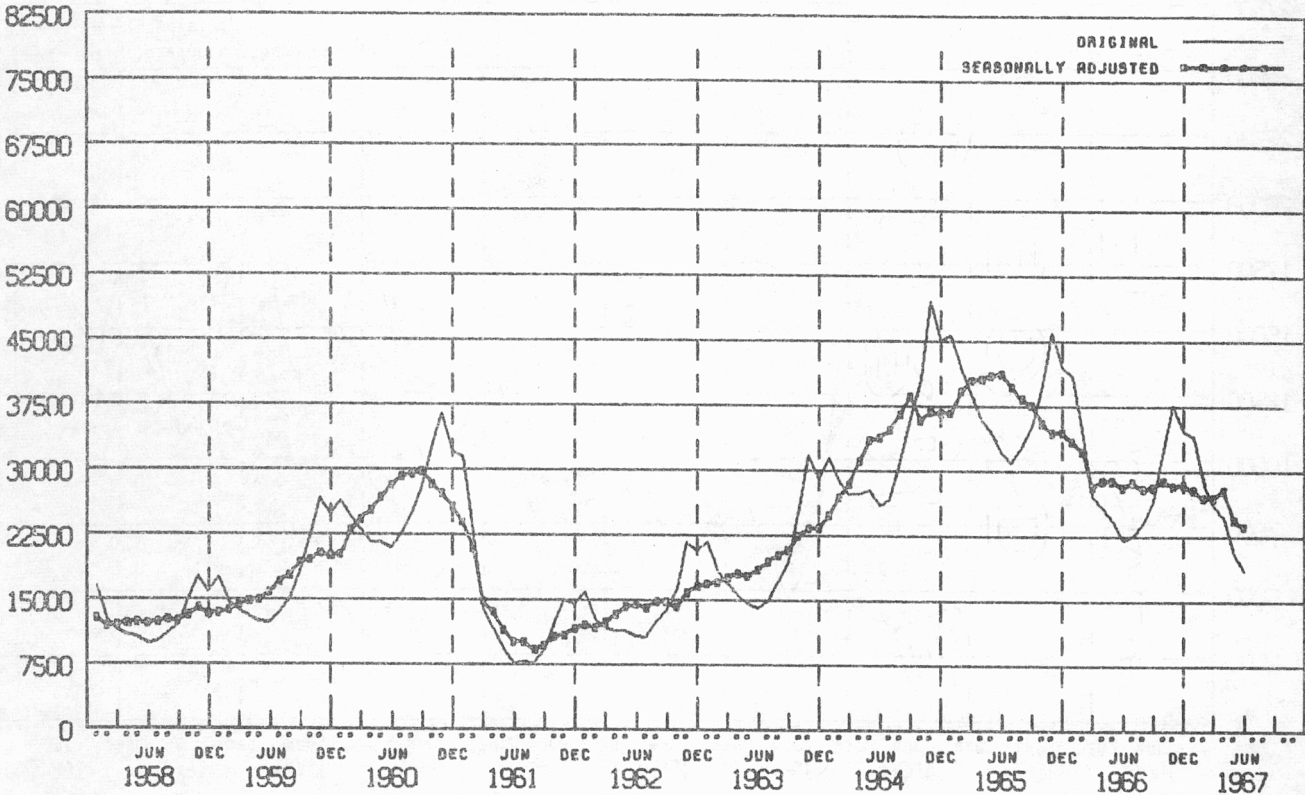


YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
ORIGINAL												
1958	74765	70029	64406	67407	65964	67144	65913	62975	60322	56779	56452	64678
1959	81901	76926	69344	69215	67621	65708	63623	59233	52322	49077	50718	58299
1960	69032	61023	54165	51559	48606	47213	44280	39945	35623	34410	43313	53563
1961	71118	73072	81865	89367	102554	111684	113439	110701	109123	96552	100057	115936
1962	131496	112250	101093	98547	93916	93128	90091	83376	75951	72648	80934	101248
1963	111807	96042	84912	84625	82870	81407	78131	67229	58886	51693	59500	80096
1964	85809	69227	57925	54461	49780	48543	45110	39578	35166	37494	37053	54506
1965	63023	50747	41671	41014	41843	42145	41021	36585	35641	36381	45682	67459
1966	78308	65965	58304	56576	56537	59020	56823	54279	50916	48571	59877	76457
1967	88965	76254	64857	64046	66185	68491						
SEASONALLY ADJUSTED												
1958	60694	60522	60834	63166	63305	65174	65415	66972	70190	70049	66306	66738
1959	66629	67432	66029	65439	64782	63410	63120	63021	61313	60811	59222	58483
1960	55961	53988	51918	49160	46604	45383	44026	42786	42239	43102	50293	51856
1961	56967	64815	78771	85839	99136	107833	113404	120159	131462	122502	115054	107777
1962	103293	99106	97893	95694	91693	90784	91011	92321	93100	93388	92040	89930
1963	85588	84068	82782	83097	82220	80455	80214	76147	73282	67108	66846	68334
1964	63999	59793	56910	54212	50111	48669	47047	45760	44294	49132	41222	45096
1965	45911	43315	41133	41303	42717	42732	43336	42876	45274	47956	50423	54955
1966	56208	55753	57744	57566	58110	60247	60425	64046	64975	64121	65915	61712
1967	63443	64173	64344	65535	68284	70136						

(A) PERSONS WHO CLAIMED WHEN REGISTERING THAT THEY WERE NOT EMPLOYED AND WHO WERE RECORDED AS UNPLACED. GENERALLY AT FRIDAY NEAREST END OF MONTH.

NOTE - ALL SEASONALLY ADJUSTED FIGURES ARE SUBJECT TO REVISION.

JOB VACANCIES REGISTERED  
WITH COMMONWEALTH EMPLOYMENT SERVICE (A) - FOR MALES  
(SOURCE OF ORIGINAL DATA - DEPARTMENT OF LABOUR AND NATIONAL SERVICE)

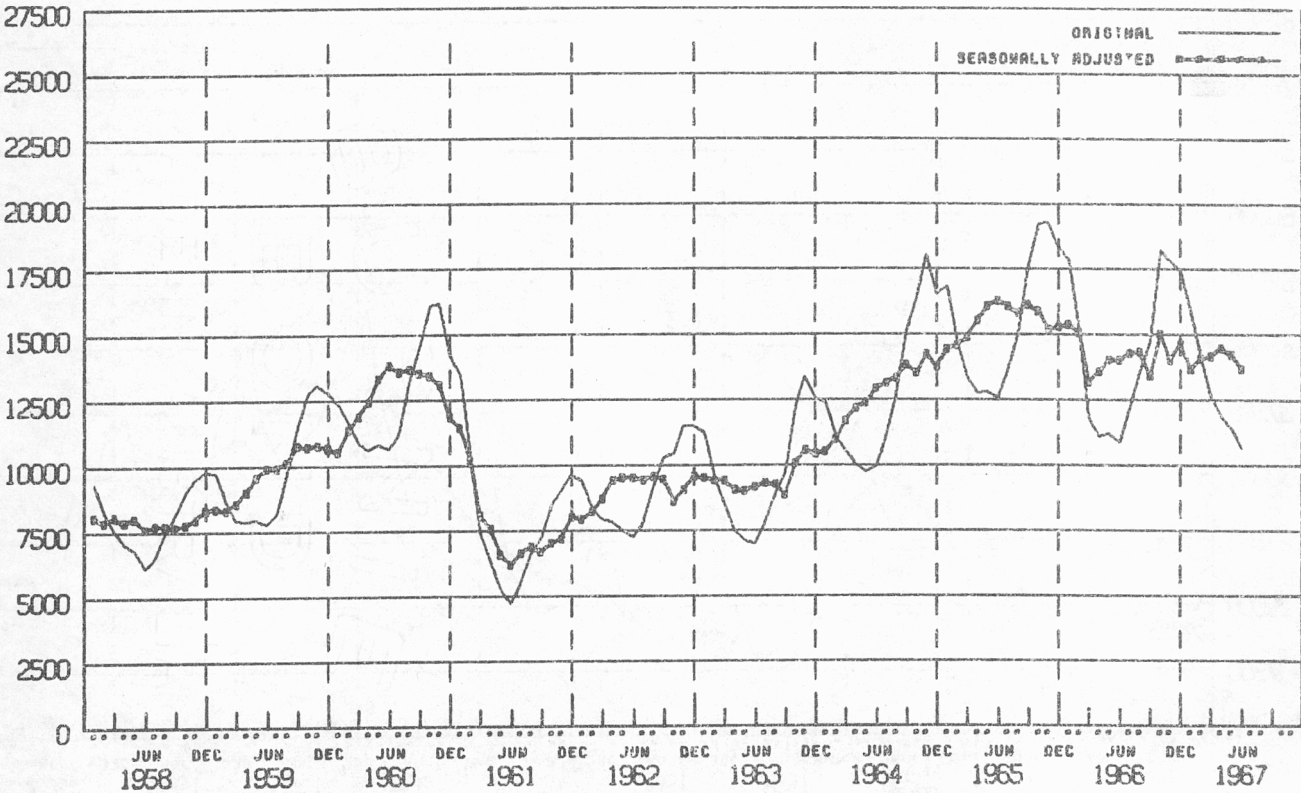


YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
ORIGINAL												
1958	16575	12533	11611	10955	10600	9836	10059	10895	11966	15076	17709	15907
1959	17580	14621	13763	12999	12427	12250	13384	14961	18245	22688	26644	24736
1960	26465	24524	23103	21643	21664	21064	22531	24690	28029	32982	36466	32137
1961	31428	22466	14017	11647	9238	7593	7769	7684	9131	12479	14963	14612
1962	15847	12627	11833	11373	11356	10814	10701	12408	13796	16358	21680	20664
1963	21701	18289	16878	15610	14557	14033	14795	17049	19471	25660	31747	28974
1964	31552	28666	27238	27282	27700	26002	26769	30985	36077	40549	49605	44960
1965	45642	41691	39005	35965	34347	32071	30843	32651	35245	40002	46013	42068
1966	41016	34118	27213	25749	24283	22116	22479	23902	26506	32536	37666	34576
1967	34000	28501	26097	24795	20594	18669						
SEASONALLY ADJUSTED												
1958	12897	11965	12085	12253	12415	12308	12483	12772	12641	13259	14070	13286
1959	13516	13843	14423	14920	15035	15937	17046	17779	19350	19641	20451	20172
1960	20176	23056	24335	25333	26908	28199	29290	29619	29876	28291	27244	25853
1961	23976	21045	14805	13718	11586	10264	10235	9241	9781	10736	11024	11693
1962	12173	11802	12483	13349	14193	14562	14139	14877	14822	14178	15932	16595
1963	16879	17140	17761	18114	17896	18620	19465	20276	20922	22488	23461	23439
1964	24966	26969	28474	31213	33575	33936	34855	36608	38661	35806	36916	36726
1965	36783	39335	40567	40687	41081	41283	39788	38384	37606	35538	34462	34573
1966	33474	32228	28177	28980	28894	28247	28826	28048	28203	28970	28310	28487
1967	27888	26938	26980	27872	24424	23744						

(A) VACANCIES WHICH EMPLOYERS CLAIMED WERE AVAILABLE EITHER IMMEDIATELY OR BY THE END OF FOLLOWING CALENDAR MONTH, GENERALLY AT FRIDAY NEAREST END OF MONTH.

NOTE - ALL SEASONALLY ADJUSTED FIGURES ARE SUBJECT TO REVISION.

JOB VACANCIES REGISTERED  
WITH COMMONWEALTH EMPLOYMENT SERVICE (A) - FOR FEMALES  
(SOURCE OF ORIGINAL DATA - DEPARTMENT OF LABOUR AND NATIONAL SERVICE)



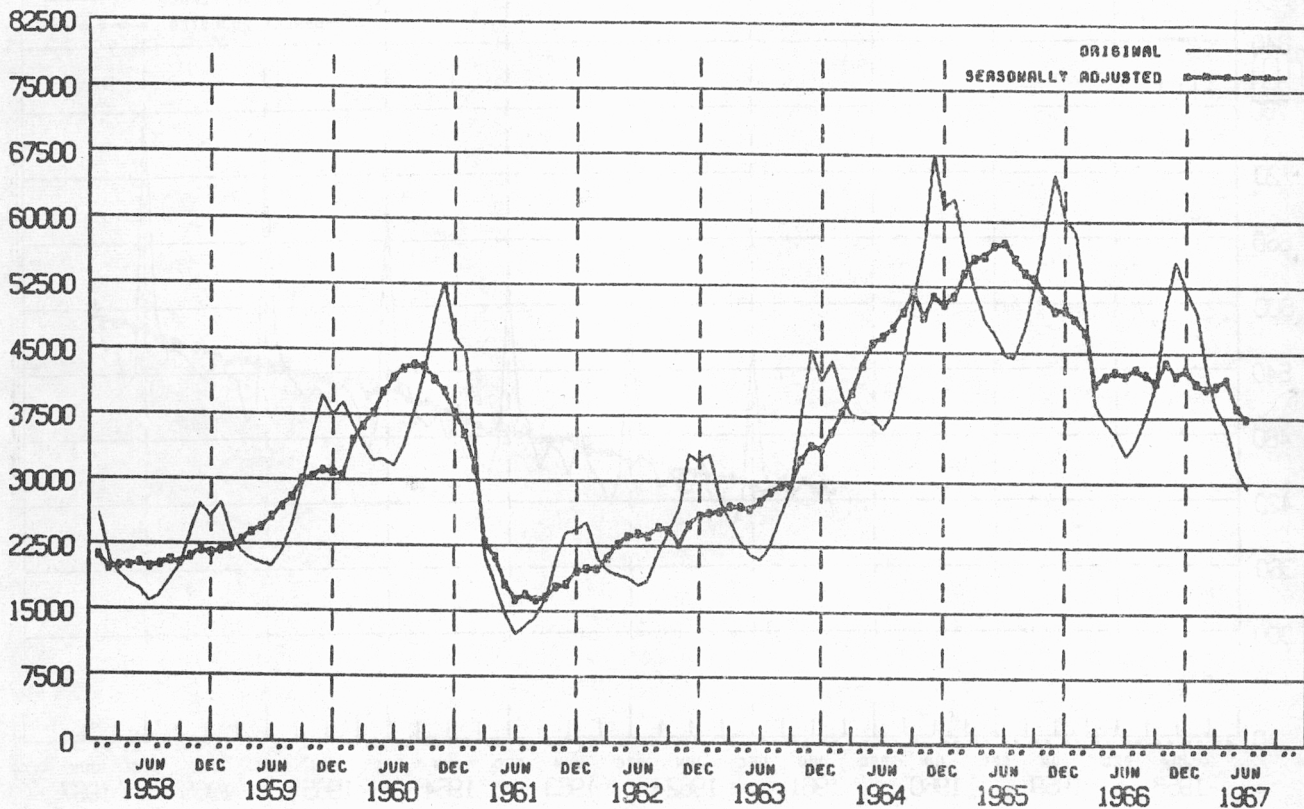
YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
ORIGINAL												
1958	9349	8214	7618	7068	6817	6122	6445	7438	8147	9057	9482	9814
1959	9775	8606	7969	7885	7946	7793	8165	9762	11501	12728	13095	12780
1960	12341	11644	10882	10616	10808	10652	11142	13144	14486	16119	16210	14210
1961	13484	10367	7429	6369	5258	4715	5440	6591	7187	8502	8993	9672
1962	9382	8320	7964	7833	7510	7252	7759	9128	10284	10453	11504	11520
1963	11252	9512	8574	7504	7105	7020	7761	8836	9681	12237	13424	12532
1964	12413	11042	10571	10055	9761	9938	10997	12631	15079	16415	18056	16522
1965	16846	14627	13404	12763	12778	12618	13553	14956	17621	19253	19324	18283
1966	17844	15101	11802	11115	11209	10905	12092	13530	14717	18232	17847	17461
1967	15854	14086	12655	11857	11417	10666						
SEASONALLY ADJUSTED												
1958	8101	7895	8120	7921	8068	7664	7763	7762	7709	7795	7981	8333
1959	8418	8368	8605	9057	9605	9947	9930	10165	10805	10754	10799	10723
1960	10530	11411	11876	12470	13354	13832	13625	13687	13530	13436	13124	11830
1961	11472	10214	8149	7593	6609	6175	6659	6894	6677	7047	7176	8034
1962	7954	8228	8764	9428	9562	9526	9448	9590	9507	8636	9109	9585
1963	9548	9448	9458	9080	9055	9190	9374	9316	8914	10114	10602	10441
1964	10570	11007	11707	12221	12381	12934	13159	13366	13831	13562	14241	13791
1965	14460	14619	14915	15558	16083	16310	16099	15848	16136	15910	15217	15289
1966	15402	15107	13199	13582	14040	14055	14298	14331	13463	15064	14041	14627
1967	13711	14098	14205	14502	14251	13723						

(A) VACANCIES WHICH EMPLOYERS CLAIMED WERE AVAILABLE EITHER IMMEDIATELY OR BY THE END OF FOLLOWING CALENDAR MONTH. GENERALLY AT FRIDAY NEAREST END OF MONTH.

NOTE - ALL SEASONALLY ADJUSTED FIGURES ARE SUBJECT TO REVISION.



JOB VACANCIES REGISTERED  
WITH COMMONWEALTH EMPLOYMENT SERVICE (A) - TOTAL  
(SOURCE OF ORIGINAL DATA - DEPARTMENT OF LABOUR AND NATIONAL SERVICE)

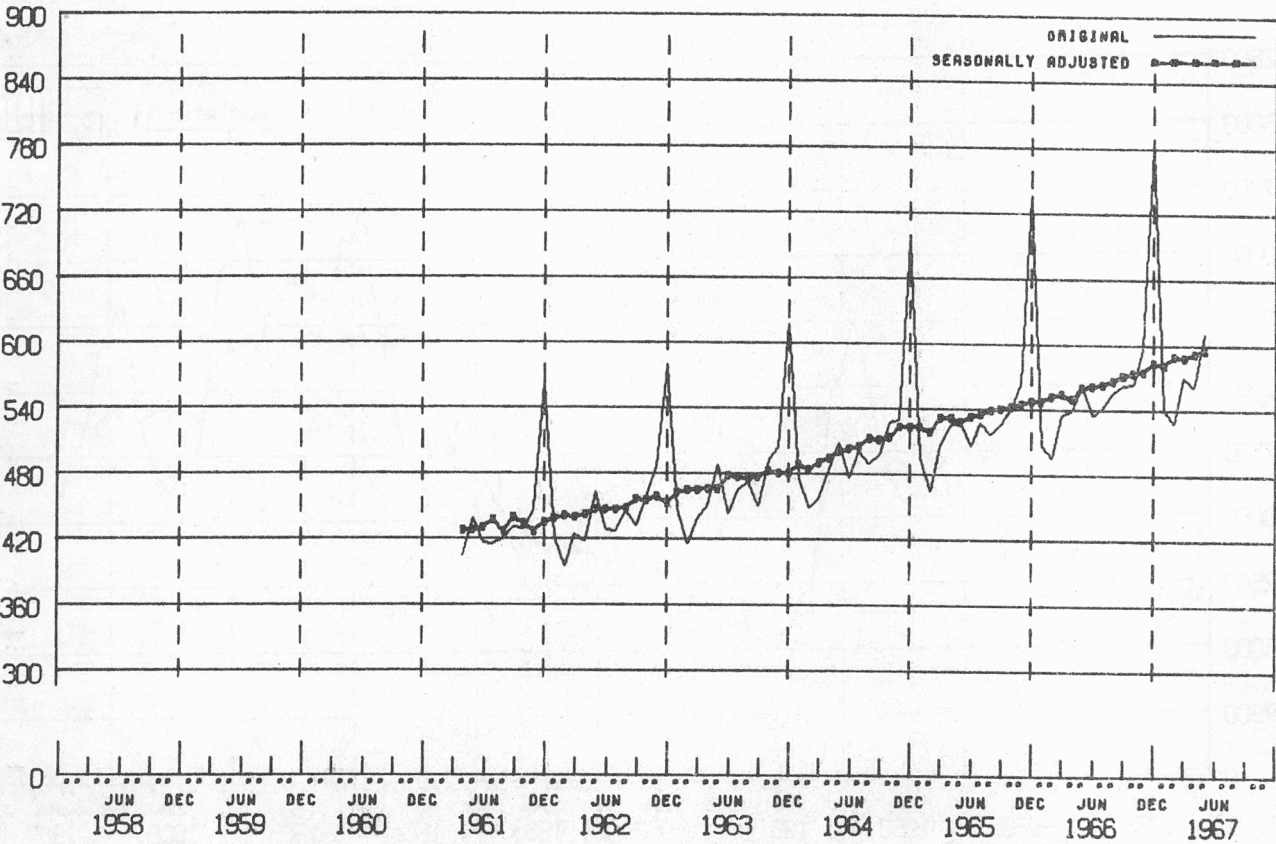


YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
ORIGINAL												
1958	25924	20747	19229	18023	17417	15958	16504	18333	20113	24133	27191	25721
1959	27355	23227	21732	20884	20373	20043	21549	24723	29746	35416	39739	37516
1960	38806	36168	33985	32259	32472	31716	33673	37834	42515	49101	52676	46347
1961	44912	32833	21446	18016	14496	12308	13209	14275	16318	20981	23956	24284
1962	25229	20947	19797	19206	18866	18066	18460	21536	24080	26811	33184	32184
1963	32953	27801	25452	23114	21662	21053	22556	25885	29152	37897	45171	41506
1964	43965	39708	37809	37337	37461	35940	37766	43616	51156	56964	67661	61482
1965	62488	56318	52409	48728	47125	44689	44396	47607	52866	59255	65337	60351
1966	58860	49219	39015	36864	35492	33021	34571	37432	41223	50768	55513	52037
1967	49854	42587	38752	36652	32011	29335						
SEASONALLY ADJUSTED												
1958	21273	19865	20170	20141	20386	19895	20243	20645	20440	21113	21905	21599
1959	21911	22245	23043	23980	24563	25845	27008	28088	30210	30471	31129	30904
1960	30620	34592	36318	37858	40147	41918	42871	43276	43204	41740	40392	37754
1961	35325	31374	22999	21339	18140	16424	16971	16385	16596	17819	18143	19682
1962	19950	19986	21217	22755	23643	24067	23728	24722	24480	22844	25059	26137
1963	26344	26976	27219	27193	26861	27768	28844	29598	29640	32504	34193	33883
1964	35676	38061	40282	43451	45994	46846	47840	49725	51960	49050	51404	50575
1965	51446	54122	55745	56170	57276	57666	55788	54130	53603	51174	49804	49895
1966	48934	47354	41470	42264	42970	42382	43230	42529	41713	43906	42388	43107
1967	41611	40996	41204	41960	38650	37537						

(A) VACANCIES WHICH EMPLOYERS CLAIMED WERE AVAILABLE EITHER IMMEDIATELY OR BY THE END OF FOLLOWING CALENDAR MONTH. GENERALLY AT FRIDAY NEAREST END OF MONTH.

NOTE - ALL SEASONALLY ADJUSTED FIGURES ARE SUBJECT TO REVISION.

MONTHLY RETAIL SALES (A)(B) - ALL ITEMS  
(EXCLUDING MOTOR VEHICLES, PARTS, PETROL, ETC.)  
\$ MILLION



YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
ORIGINAL												
1961				404.7	439.3	415.9	415.4	420.5	430.8	430.0	446.9	564.1
1962	420.6	394.8	424.4	417.2	463.6	428.8	427.0	446.1	432.0	460.3	485.8	577.9
1963	447.0	415.7	438.2	450.9	487.9	443.1	464.4	472.4	449.9	493.1	504.3	617.5
1964	476.1	448.2	456.8	483.5	508.9	476.3	501.6	489.8	497.4	527.5	530.7	696.0
1965	495.3	464.8	506.7	525.9	528.5	506.5	528.5	517.0	527.0	542.9	564.2	736.8
1966	507.6	495.0	534.7	539.1	562.8	535.2	541.7	555.4	563.3	563.9	597.9	782.6
1967	541.6	527.9	571.6	561.9C	611.2C							
SEASONALLY ADJUSTED												
1961				429.0	428.5	430.5	437.7	427.1	441.0	434.5	427.4	435.7
1962	439.1	441.8	440.1	442.7	448.0	447.7	448.0	448.4	457.3	455.6	459.3	453.3
1963	462.7	465.1	465.9	467.0	467.1	478.7	477.5	475.9	477.2	483.8	481.1	481.0
1964	489.1	484.9	490.7	496.2	501.7	503.9	506.4	514.2	512.9	514.5	524.9	524.7
1965	524.8	519.8	532.5	533.1	529.5	533.6	535.9	539.5	541.8	543.7	545.5	549.0
1966	547.8	553.3	556.1	550.6	561.2	562.2	563.9	567.0	572.6	574.4	575.4	584.4
1967	582.3	589.9	588.6	593.2C	596.7C							

(A) EXCLUDES SALES IN NORTHERN TERRITORY AND AUSTRALIAN CAPITAL TERRITORY.

(B) ORIGINAL FIGURES FROM APRIL 1966 ARE SUBJECT TO REVISION WHEN MORE PRECISE INFORMATION IS AVAILABLE RELATING TO TRADING BY NEW BUSINESSES.

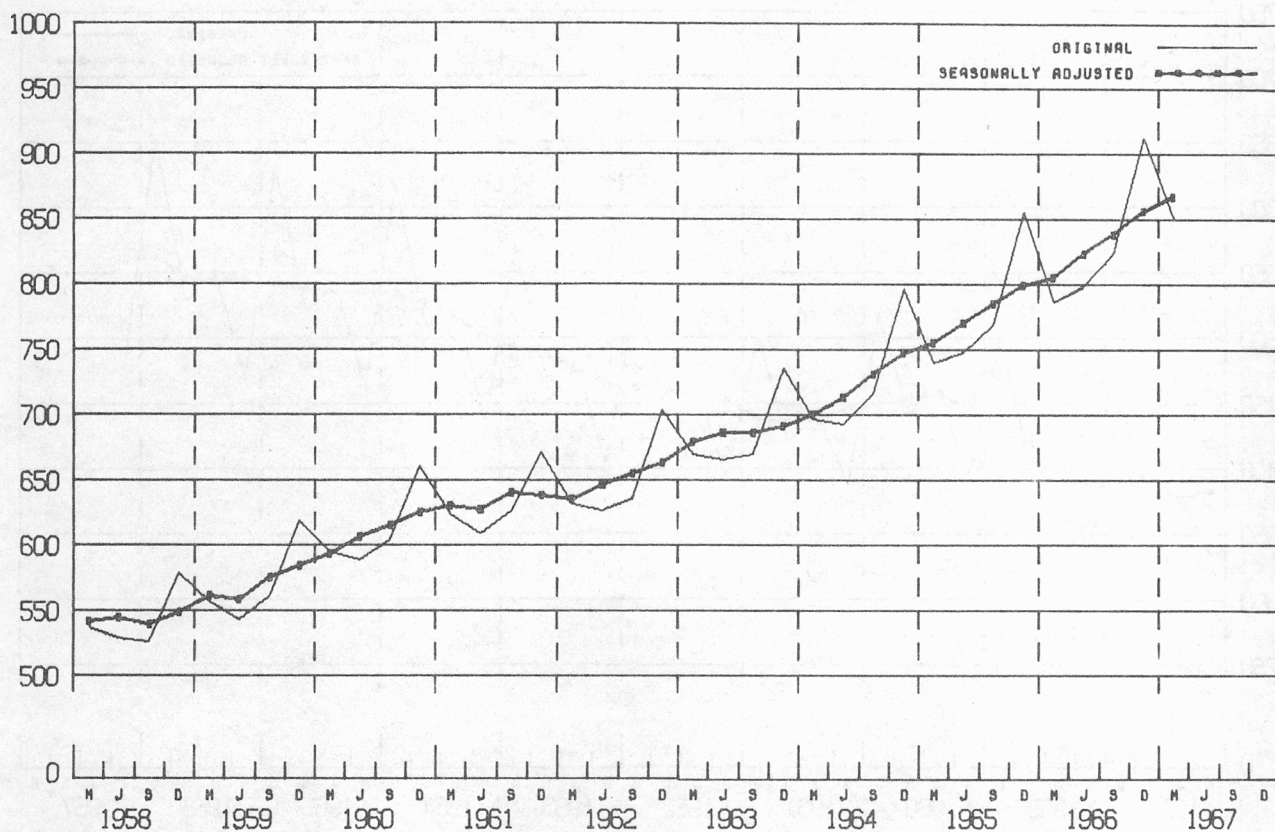
(C) PROVISIONAL ESTIMATE.

NOTE - ALL SEASONALLY ADJUSTED FIGURES ARE SUBJECT TO REVISION.

29.

## QUARTERLY RETAIL SALES (A)(B) - FOOD AND DRINK

\$ MILLION



YEAR	QUARTERS ENDED=			
	MAR	JUN	SEP	DEC
	ORIGINAL			
1958	537.0	529.4	526.1	578.6
1959	557.3	543.3	561.4	619.4
1960	595.2	588.6	603.5	661.4
1961	624.0	609.1	625.5	672.2
1962	631.7	627.0	636.4	704.0
1963	670.3	666.0	670.1	736.1
1964	697.4	692.7	715.8	797.4
1965	740.4	747.6	769.2	856.1
1966	787.1	798.4	823.4	913.4
1967	851.9			
YEAR	SEASONALLY ADJUSTED			
	MAR	JUN	SEP	DEC
	ORIGINAL			
1958	540.9	543.6	539.0	547.7
1959	561.3	558.5	575.3	584.4
1960	593.1	605.8	615.1	624.9
1961	630.1	627.3	640.1	637.9
1962	635.3	646.0	654.6	663.0
1963	679.1	686.0	685.8	690.9
1964	700.4	713.5	731.3	746.7
1965	754.9	770.0	784.6	799.2
1966	804.6	822.6	838.3	856.4
1967	866.9			

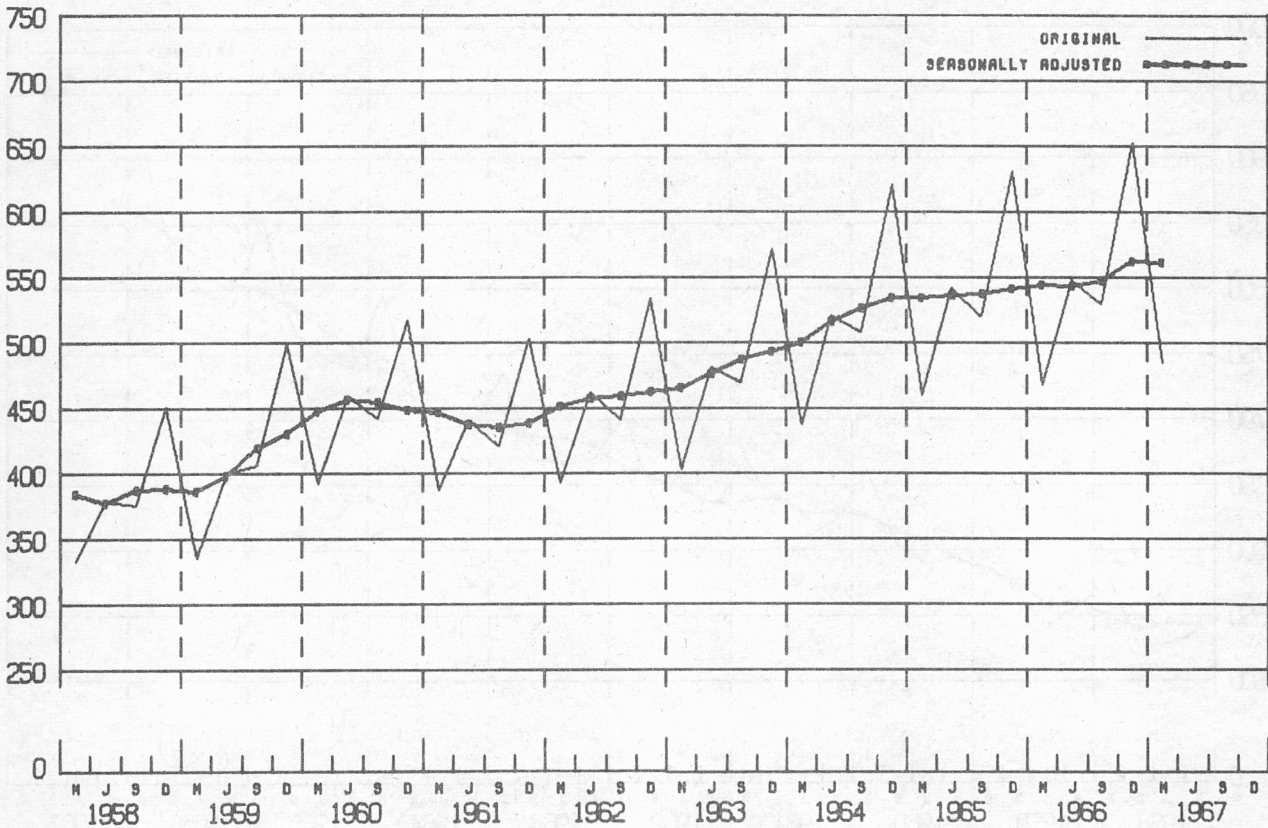
(A) EXCLUDES SALES IN NORTHERN TERRITORY AND AUSTRALIAN CAPITAL TERRITORY.

(B) ORIGINAL FIGURES FROM JUNE QUARTER 1966 ARE SUBJECT TO REVISION WHEN MORE PRECISE INFORMATION IS AVAILABLE RELATING TO TRADING BY NEW BUSINESSES.

NOTE - ALL SEASONALLY ADJUSTED FIGURES ARE SUBJECT TO REVISION.



QUARTERLY RETAIL SALES (A)(B) - CLOTHING, HARDWARE, ELECTRICAL AND FURNITURE (C)  
\$ MILLION



YEAR	QUARTERS ENDED-			
	MAR	JUN	SEP	DEC
ORIGINAL				
1958	332.8	378.4	375.0	450.3
1959	334.8	400.4	406.1	498.7
1960	392.4	459.3	442.3	517.2
1961	387.5	441.3	421.0	502.8
1962	393.2	461.8	441.1	533.9
1963	403.2	480.8	469.8	571.5
1964	437.2	521.3	508.5	620.5
1965	460.4	541.7	520.2	630.6
1966	467.6	548.1	530.4	653.1
1967	484.9			
SEASONALLY ADJUSTED				
1958	383.8	377.0	386.6	388.5
1959	385.7	398.4	418.8	430.2
1960	446.8	456.2	454.0	448.3
1961	446.4	437.3	434.6	438.4
1962	450.7	457.0	458.5	462.4
1963	465.0	475.6	486.6	492.9
1964	499.9	515.8	526.1	533.6
1965	534.4	536.3	537.5	540.6
1966	544.1	542.8	547.1	562.4
1967	561.3			

(A) EXCLUDES SALES IN NORTHERN TERRITORY AND AUSTRALIAN CAPITAL TERRITORY.

(B) ORIGINAL FIGURES FROM JUNE QUARTER 1966 ARE SUBJECT TO REVISION WHEN MORE PRECISE INFORMATION IS AVAILABLE RELATING TO TRADING BY NEW BUSINESSES.

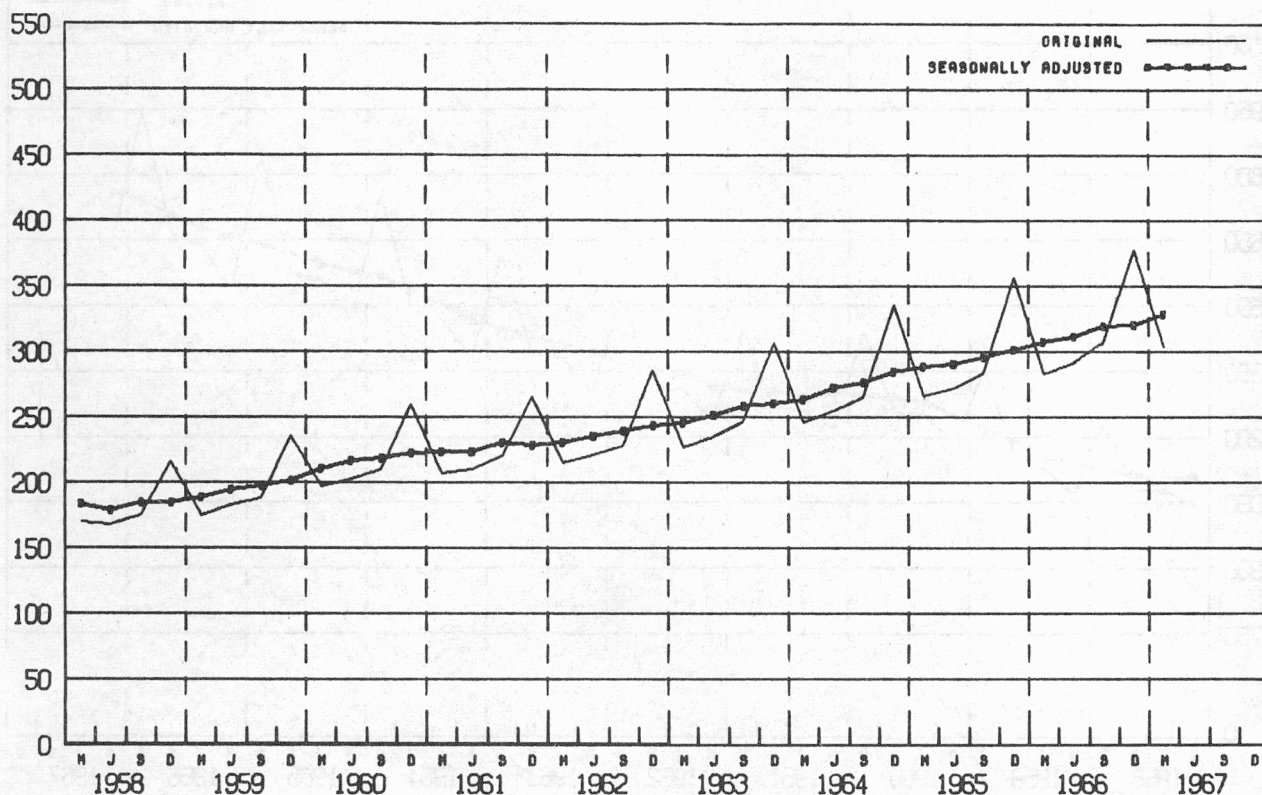
(C) INCLUDES CLOTHING AND DRAPERY; FOOTWEAR; HARDWARE (EXCLUDING BASIC BUILDING MATERIALS AND BUILDERS' HARDWARE SUPPLIES); CHINA AND GLASSWARE; ELECTRICAL GOODS; FURNITURE AND FLOOR COVERINGS.

NOTE - ALL SEASONALLY ADJUSTED FIGURES ARE SUBJECT TO REVISION.

31.

QUARTERLY RETAIL SALES (A)(B) - ALL OTHER GOODS (C)  
(EXCLUDING MOTOR VEHICLES, PARTS, PETROL, ETC.)

\$ MILLION



QUARTERS ENDED-

YEAR	MAR	JUN	SEP	DEC
ORIGINAL				
1958	170.2	167.6	175.2	216.2
1959	174.9	182.5	188.4	235.8
1960	197.3	202.7	209.8	260.4
1961	207.3	209.5	220.2	266.0
1962	214.9	220.8	227.6	286.1
1963	227.4	235.1	246.8	307.3
1964	246.5	254.7	264.5	336.3
1965	266.0	271.6	283.1	357.2
1966	282.6	290.6	306.6	377.9
1967	304.3			
SEASONALLY ADJUSTED				
1958	182.7	178.0	183.5	184.4
1959	187.7	193.9	197.3	200.6
1960	209.6	215.5	218.4	222.0
1961	223.1	222.9	230.2	227.7
1962	230.4	235.2	239.2	243.0
1963	245.4	250.8	258.0	260.1
1964	263.5	272.1	275.8	284.2
1965	288.3	290.5	294.7	301.1
1966	306.7	311.0	318.6	320.1
1967	328.4			

(A) EXCLUDES SALES IN NORTHERN TERRITORY AND AUSTRALIAN CAPITAL TERRITORY.

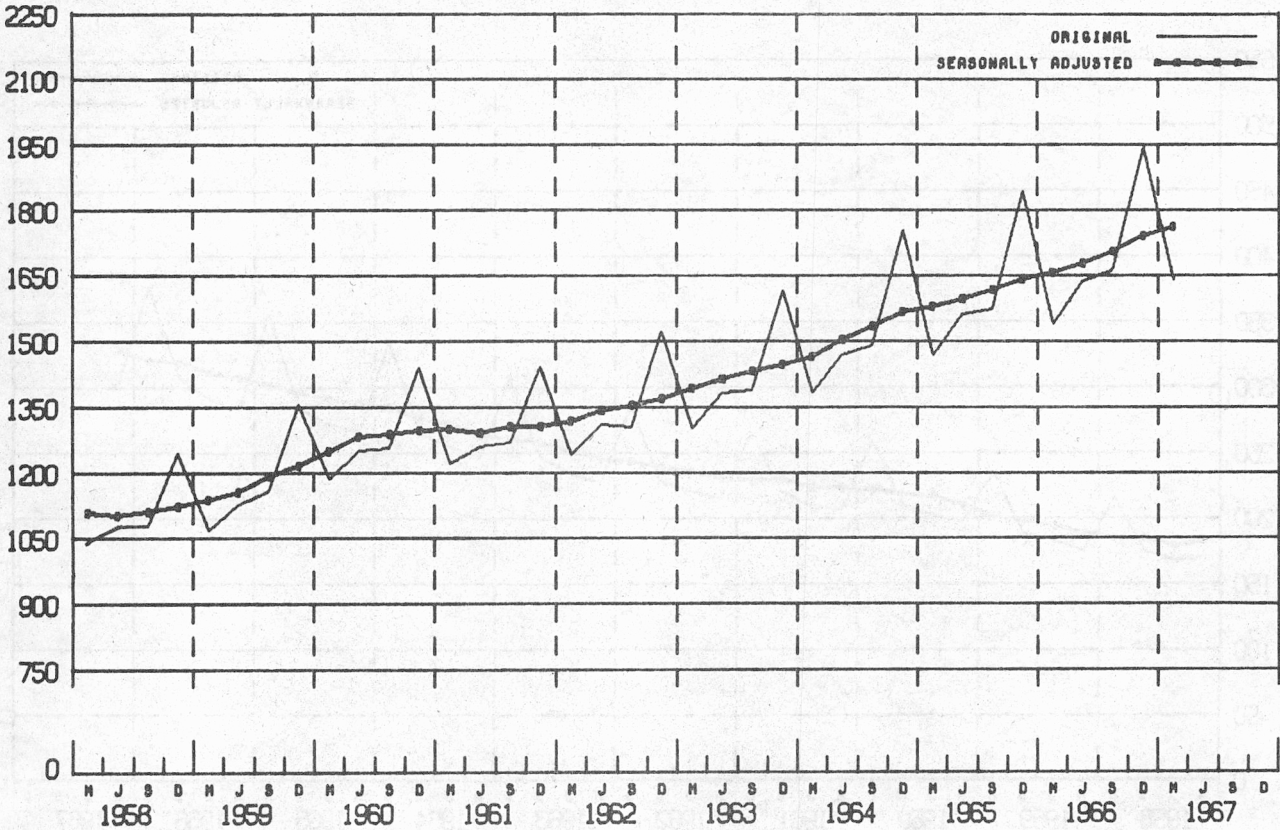
(B) ORIGINAL FIGURES FROM JUNE QUARTER 1966 ARE SUBJECT TO REVISION WHEN MORE PRECISE INFORMATION IS AVAILABLE RELATING TO TRADING BY NEW BUSINESSES.

(C) INCLUDES CHEMISTS' GOODS; NEWSPAPERS, BOOKS AND STATIONERY; TOBACCO, CIGARETTES, ETC.; JEWELLERY, SPORTING GOODS, ETC.; BUT EXCLUDES GRAIN AND PRODUCE AND BUSINESS MACHINES.

NOTE - ALL SEASONALLY ADJUSTED FIGURES ARE SUBJECT TO REVISION.

QUARTERLY RETAIL SALES (A)(B) - ALL ITEMS  
(EXCLUDING MOTOR VEHICLES, PARTS, PETROL, ETC.)

\$ MILLION



YEAR	QUARTERS ENDED-			
	MAR	JUN	SEP	DEC
	ORIGINAL			
1958	1040.0	1075.4	1076.3	1245.1
1959	1067.0	1126.2	1155.9	1353.9
1960	1184.9	1250.6	1255.6	1439.0
1961	1218.8	1259.9	1266.7	1441.0
1962	1239.8	1309.6	1305.1	1524.0
1963	1300.9	1381.9	1386.7	1614.9
1964	1381.1	1468.7	1488.8	1754.2
1965	1466.8	1560.9	1572.5	1843.9
1966	1537.3	1637.1	1660.4	1944.4
1967	1641.1			
SEASONALLY ADJUSTED				
1958	1106.5	1101.4	1108.3	1119.6
1959	1135.0	1153.0	1190.6	1215.0
1960	1246.7	1279.9	1287.0	1295.0
1961	1299.0	1288.4	1304.6	1303.4
1962	1315.8	1338.6	1352.2	1368.5
1963	1390.0	1412.2	1430.4	1444.9
1964	1462.6	1501.5	1533.2	1565.7
1965	1576.8	1596.2	1617.0	1640.8
1966	1656.5	1674.7	1704.3	1737.9
1967	1759.8			

(A) EXCLUDES SALES IN NORTHERN TERRITORY AND AUSTRALIAN CAPITAL TERRITORY.

(B) ORIGINAL FIGURES FROM JUNE QUARTER 1966 ARE SUBJECT TO REVISION WHEN MORE PRECISE INFORMATION IS AVAILABLE RELATING TO TRADING BY NEW BUSINESSES.

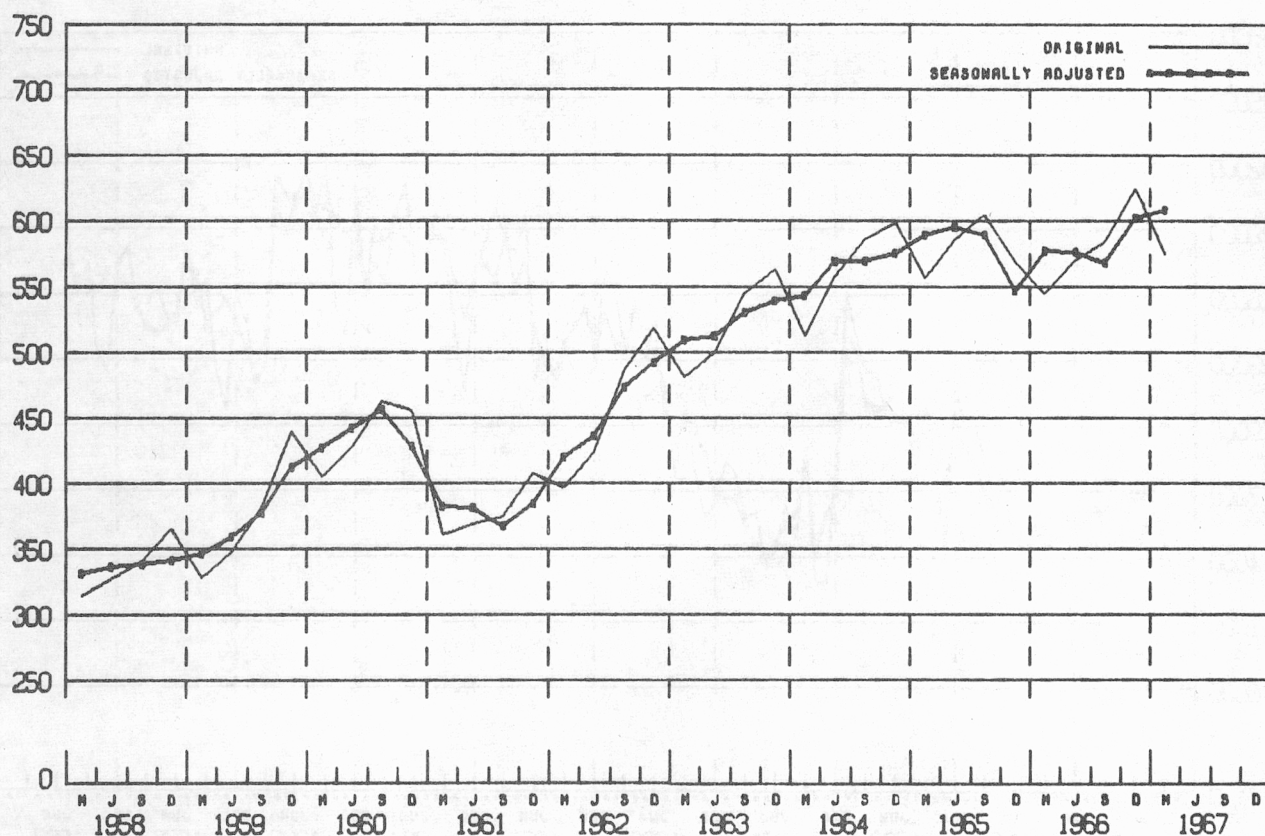
NOTE - ALL SEASONALLY ADJUSTED FIGURES ARE SUBJECT TO REVISION.



33.

## QUARTERLY RETAIL SALES (A)(B) - MOTOR VEHICLES, PARTS, PETROL ETC.

\$ MILLION



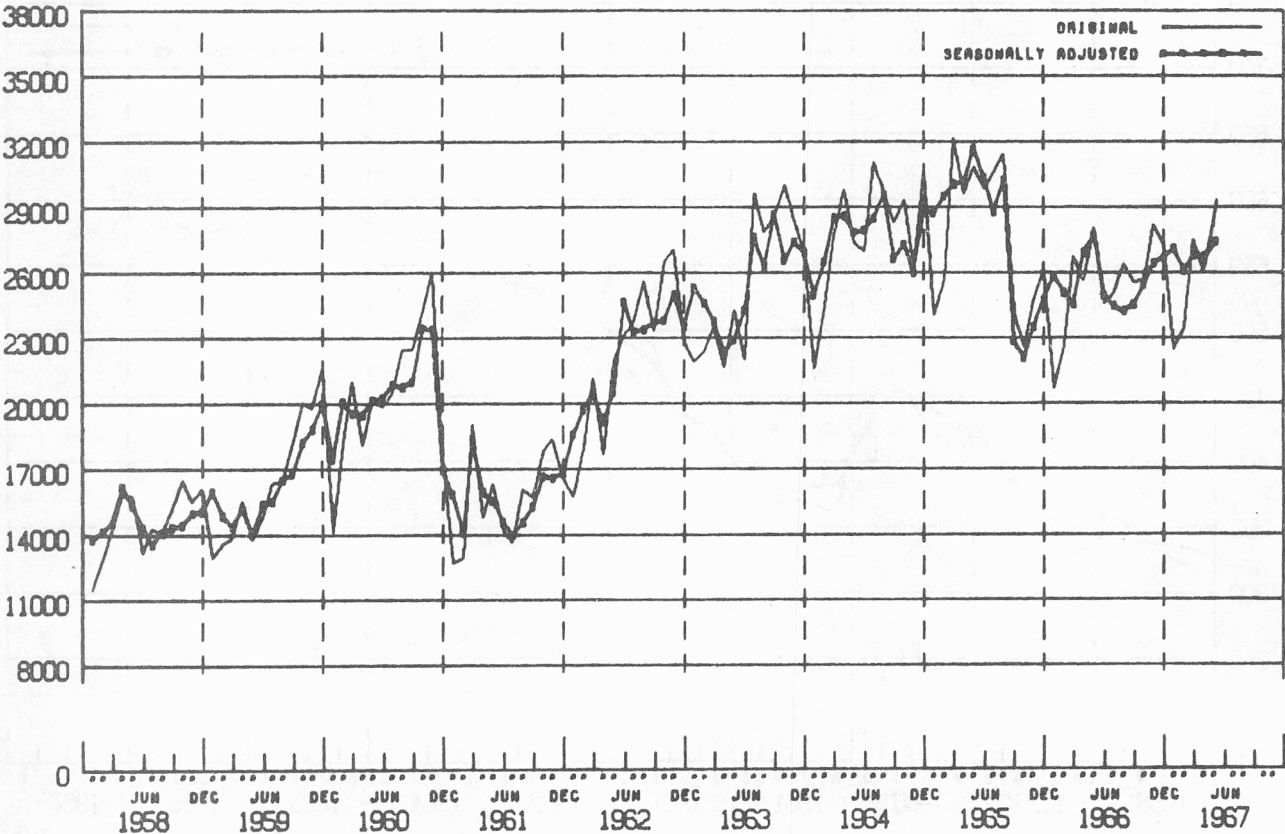
YEAR	QUARTERS ENDED-			
	MAR	JUN	SEP	DEC
	ORIGINAL			
1958	314.4	326.8	340.4	365.2
1959	328.2	348.1	381.7	440.2
1960	404.6	428.2	463.2	456.1
1961	361.4	369.0	374.9	407.8
1962	397.0	423.5	485.6	518.8
1963	481.5	499.7	544.9	564.0
1964	513.4	557.9	585.7	599.0
1965	557.2	585.9	605.2	569.1
1966	545.2	569.7	583.7	625.1
1967	575.0			
YEAR	SEASONALLY ADJUSTED			
	MAR	JUN	SEP	DEC
	ORIGINAL			
1958	330.6	335.8	338.2	341.1
1959	345.7	358.5	377.4	411.7
1960	426.9	441.8	455.6	427.7
1961	381.9	380.9	366.5	384.5
1962	420.0	435.7	473.1	492.4
1963	509.4	511.8	529.8	538.7
1964	542.9	568.5	569.4	574.5
1965	589.4	594.6	588.6	547.2
1966	577.1	576.4	568.2	601.7
1967	608.3			

(A) EXCLUDES SALES IN NORTHERN TERRITORY AND AUSTRALIAN CAPITAL TERRITORY.

(B) ORIGINAL FIGURES FROM JUNE QUARTER 1966 ARE SUBJECT TO REVISION WHEN MORE PRECISE INFORMATION IS AVAILABLE RELATING TO TRADING BY NEW BUSINESSES.

NOTE - ALL SEASONALLY ADJUSTED FIGURES ARE SUBJECT TO REVISION.

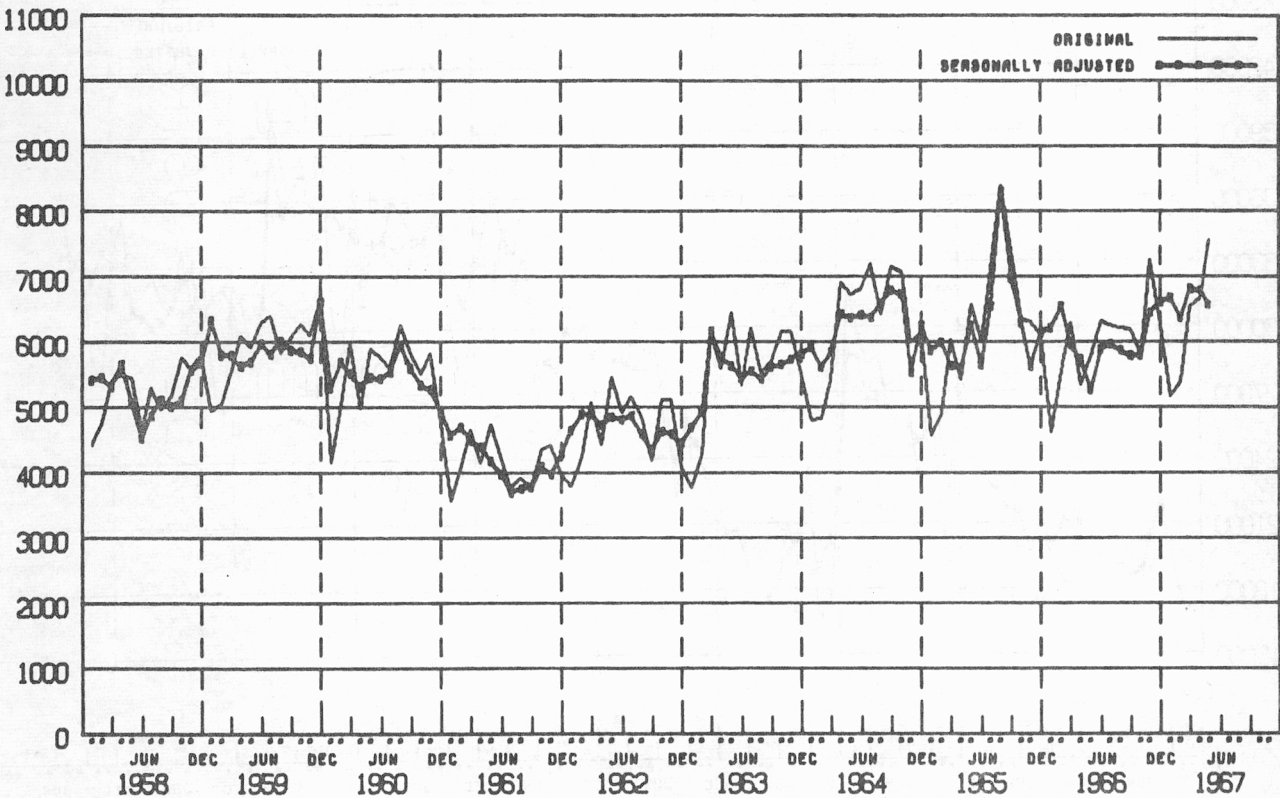
NEW MOTOR VEHICLES REGISTERED (A) - CARS AND STATION WAGONS



YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
ORIGINAL												
1958	11495	12845	14178	15775	15775	13174	14286	14140	15223	16528	15526	16126
1959	12942	13574	13804	15540	13759	14866	16357	16462	18179	20060	19800	21646
1960	14132	18213	21034	18081	20192	19899	20399	22465	22463	24266	26067	17607
1961	12704	12905	19013	14755	16342	14156	13620	16096	15735	17848	18383	16575
1962	15759	17988	21212	17665	21908	23137	23703	25624	23317	26547	27086	22843
1963	21926	22381	23564	21612	24336	21987	29675	27858	28586	30034	28471	26950
1964	21572	24417	27595	29858	27370	26952	31083	29719	28253	29367	26247	30630
1965	23993	25659	32178	29614	30879	29868	30546	31479	24145	22595	24686	26109
1966	20643	22668	26804	25660	28077	24567	24981	26442	25563	25619	28217	27238
1967	22472	23466	27535	26070	29146P							
SEASONALLY ADJUSTED												
1958	13830	14156	14588	16240	15355	14345	13573	14134	14338	14462	15025	15086
1959	16001	14895	14436	15183	14075	15458	15586	16534	16821	18280	18877	19996
1960	17452	20097	19598	19503	20161	20304	20903	20769	21019	23469	23436	17015
1961	15838	14141	18295	15991	15589	14586	13996	14588	15338	16722	16662	16825
1962	18625	19740	20556	19248	20525	24651	23304	23401	23735	23843	25012	23517
1963	25317	24619	23782	22389	22954	24332	27663	26321	28719	26618	27410	26931
1964	24962	26532	28516	28665	27870	27989	28504	29621	26684	27299	25986	28861
1965	28748	29524	30063	30193	31673	30375	28813	30251	22886	22116	23516	24805
1966	25874	25126	24588	26946	27741	24953	24522	24261	24552	25470	26507	26696
1967	27148	26099	26822	26750	27512P							

(A) SEE EXPLANATORY NOTES.  
(P) PRELIMINARY ESTIMATE.  
NOTE - ALL SEASONALLY ADJUSTED FIGURES ARE SUBJECT TO REVISION.

NEW MOTOR VEHICLES REGISTERED (A) - OTHER THAN CARS AND STATION WAGONS (B)



YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
ORIGINAL												
1958	4430	4753	5383	5493	5461	4612	5291	4954	5161	5750	5603	5783
1959	4943	5049	5490	6092	5924	6296	6400	5820	6067	6281	6110	6637
1960	4140	5017	5980	4973	5900	5755	5604	6253	5811	5505	5824	4779
1961	3556	4090	4657	4132	4741	4217	3751	3924	3790	4362	4413	3975
1962	3775	4240	5077	4428	5465	4921	5168	4874	4177	5123	5122	4087
1963	3761	4266	6138	5583	6446	5312	6223	5512	5698	6157	6157	5530
1964	4798	4813	5417	6918	6727	6826	7203	6422	7169	7073	5983	6143
1965	4561	4905	6030	5422	6580	6021	7104	8402	7400	6335	6312	6109
1966	4630	5546	6297	5340	5776	6314	6269	6219	6195	5791	7253	6261
1967	5167	5370	6531	6665	7542P							
SEASONALLY ADJUSTED												
1958	5413	5453	5313	5663	5078	4537	4881	5117	5011	5124	5589	5673
1959	6332	5800	5798	5645	5701	5970	5824	6029	5887	5853	5760	6623
1960	5307	5704	5515	5314	5455	5438	5537	5954	5596	5347	5283	4968
1961	4580	4709	4492	4404	4184	3971	3698	3757	3779	4105	3978	4306
1962	4663	4894	4909	4744	4854	4811	4871	4596	4354	4641	4596	4457
1963	4696	4950	6178	5784	5643	5453	5569	5449	5616	5655	5731	5825
1964	5922	5625	5865	6436	6389	6415	6389	6601	6796	6746	5549	6266
1965	5888	6006	5641	5596	6252	5650	6568	8316	6989	6297	5635	6161
1966	6224	6563	5968	5737	5281	5905	5985	5882	5808	5803	6459	6615
1967	6679	6382	6811	6791	6596P							

(A) SEE EXPLANATORY NOTES.

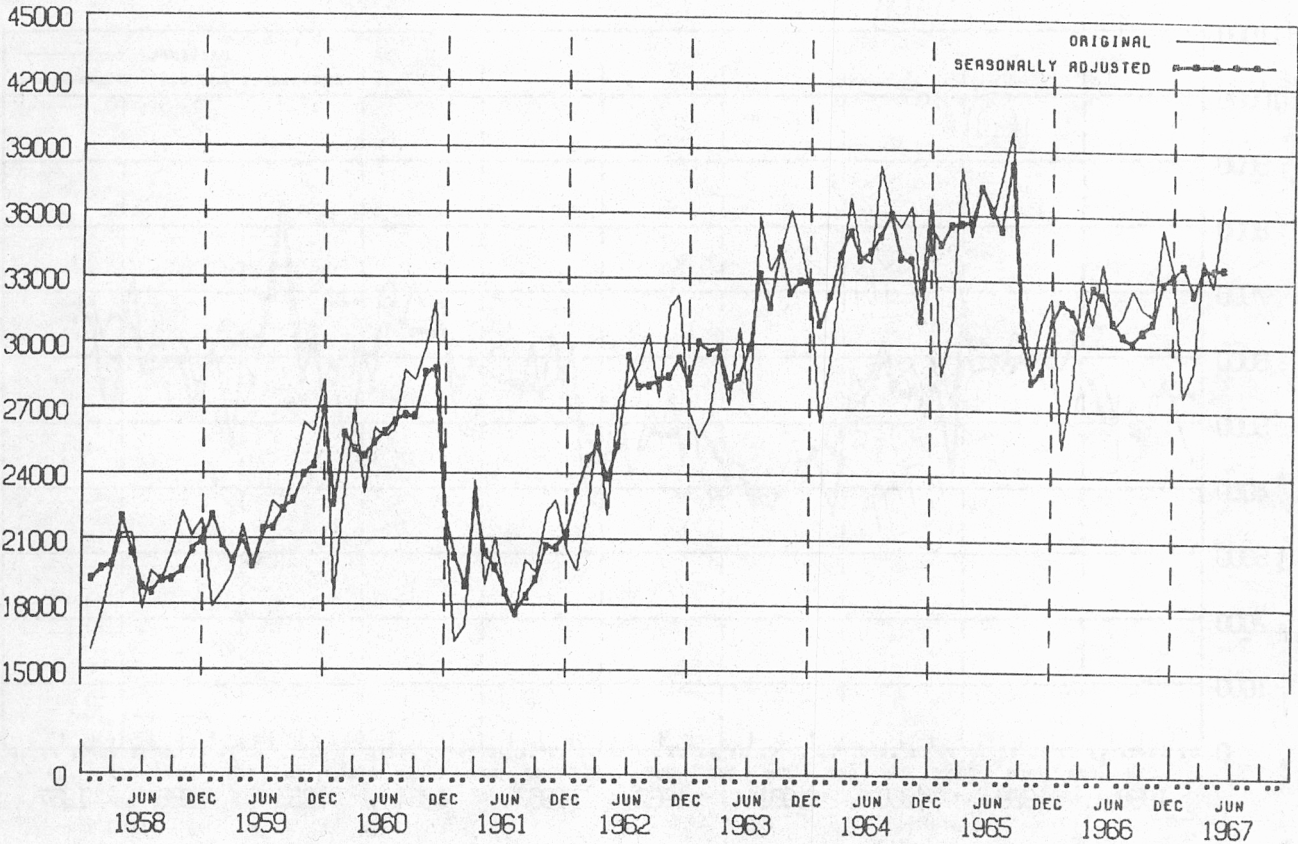
(B) EXCLUDING MOTOR CYCLES, TRACTORS, ETC.

(P) PRELIMINARY ESTIMATE.

NOTE - ALL SEASONALLY ADJUSTED FIGURES ARE SUBJECT TO REVISION.



NEW MOTOR VEHICLES REGISTERED (A) = TOTAL (B)



YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
ORIGINAL												
1958	15925	17598	19561	21268	21236	17786	19577	19094	20384	22278	21129	21909
1959	17885	18623	19294	21632	19683	21162	22757	22282	24246	26341	25910	28283
1960	18272	23230	27014	23054	26092	25654	26003	28718	28274	29771	31891	22386
1961	16260	16995	23670	18887	21083	18373	17371	20020	19525	22210	22796	20550
1962	19534	22228	26289	22093	27373	28058	28871	30498	27494	31670	32208	26930
1963	25687	26647	29702	27195	30782	27299	35898	33370	34284	36191	34628	32480
1964	26370	29230	33012	36776	34097	33778	38286	36141	35422	36440	32230	36773
1965	28554	30564	38208	35036	37459	35889	37650	39881	31554	28930	30998	32218
1966	25273	28214	33101	31000	33853	30881	31250	32661	31758	31410	35470	33499
1967	27639	28836	34066	32735	33688P							
SEASONALLY ADJUSTED												
1958	19175	19695	19846	22037	20382	18861	18574	19158	19229	19606	20532	20930
1959	22085	20764	20053	21008	19828	21507	21544	22397	22812	24020	24442	26914
1960	22592	25839	25121	24814	25460	25945	26408	26708	26632	28639	28780	22121
1961	20198	18890	22776	20421	19756	18596	17614	18394	19213	20683	20642	21315
1962	23218	24711	25323	23894	25340	29465	27999	28092	28348	28472	29368	28172
1963	30121	29647	29857	28058	28501	29873	33269	31721	34460	32378	32938	32856
1964	30945	32261	34135	35235	33931	34343	35050	36088	34046	33931	31179	35483
1965	34709	35592	35639	35715	37306	36290	35347	38374	30405	28365	28833	31126
1966	32061	31644	30572	32711	32400	31153	30521	30225	30712	31124	32943	33283
1967	33791	32445	33634	33594	33631P							

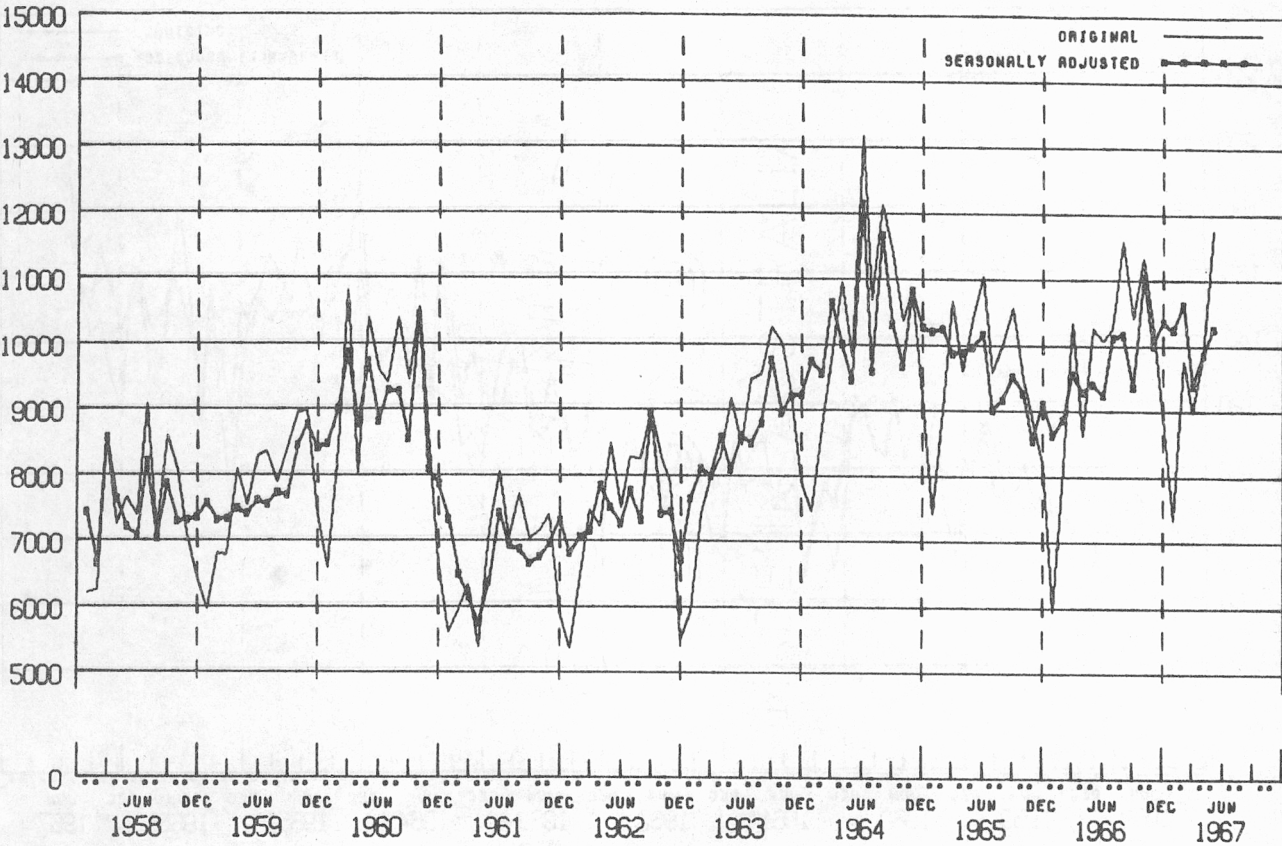
(A) SEE EXPLANATORY NOTES.

(B) EXCLUDING MOTOR CYCLES, TRACTORS, ETC.

(P) PRELIMINARY ESTIMATE.

NOTE - ALL SEASONALLY ADJUSTED FIGURES ARE SUBJECT TO REVISION.

NEW HOUSES AND FLATS APPROVED - NUMBER

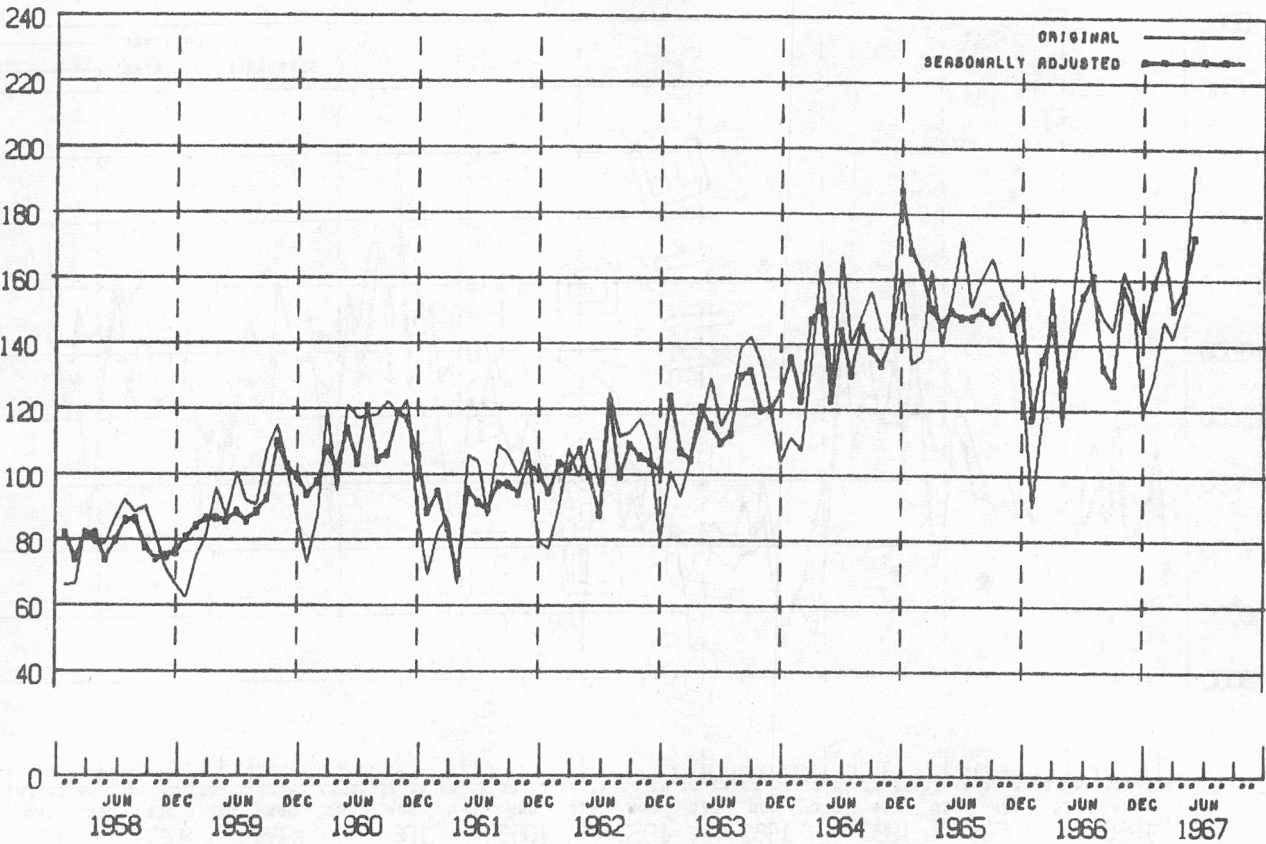


YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
ORIGINAL												
1958	6195	6239	8593	7231	7667	7372	9078	7127	8594	8087	7129	6450
1959	5960	6814	6790	8096	7541	8303	8368	7875	8429	8951	8978	7392
1960	6583	8423	10817	8018	10404	9599	9391	10396	9435	10569	8662	6654
1961	5600	5969	6341	5371	7166	8062	7015	7725	7023	7165	7408	5928
1962	5359	6472	7479	7224	8495	7498	8273	8258	8985	8276	7884	5474
1963	5925	7417	7947	8297	9186	8467	9465	9541	10284	10022	9256	7929
1964	7467	8748	9752	10959	9826	13175	10681	12146	11395	10359	10814	9247
1965	7412	9022	10670	9596	10391	11058	9588	10004	10571	9498	8899	8212
1966	5933	8148	10354	8615	10279	10083	10253	11603	10421	11339	10377	8921
1967	7349	9775	8981	9845	11760							
SEASONALLY ADJUSTED												
1958	7449	6669	8573	7647	7223	7072	8228	7045	7872	7302	7311	7363
1959	7584	7324	7339	7501	7424	7625	7567	7747	7691	8462	8777	8420
1960	8486	9027	9886	8781	9742	8826	9302	9289	8568	10470	8104	7888
1961	7330	6495	6155	5768	6387	7434	6934	6871	6667	6756	6961	7318
1962	6820	7066	7167	7860	7524	7255	7788	7313	8967	7421	7453	6714
1963	7663	8115	7998	8608	8093	8613	8502	8791	9783	8955	9223	9239
1964	9767	9567	10666	10013	9450	12156	9594	11684	10329	9674	10834	10277
1965	10227	10269	9870	9908	9987	10182	9020	9180	9539	9282	8558	9127
1966	8636	8882	9578	9308	9425	9257	10147	10174	9385	11055	10014	10372
1967	10251	10633	9398	9881	10279							

BUILDING APPROVALS ARE AFFECTED BY LARGE PROJECTS SUCH AS BLOCKS OF FLATS AND GOVERNMENT GROUP CONTRACTS APPROVED IN PARTICULAR MONTHS.

NOTE - ALL SEASONALLY ADJUSTED FIGURES ARE SUBJECT TO REVISION.

TOTAL BUILDINGS APPROVED - VALUE  
\$ MILLION



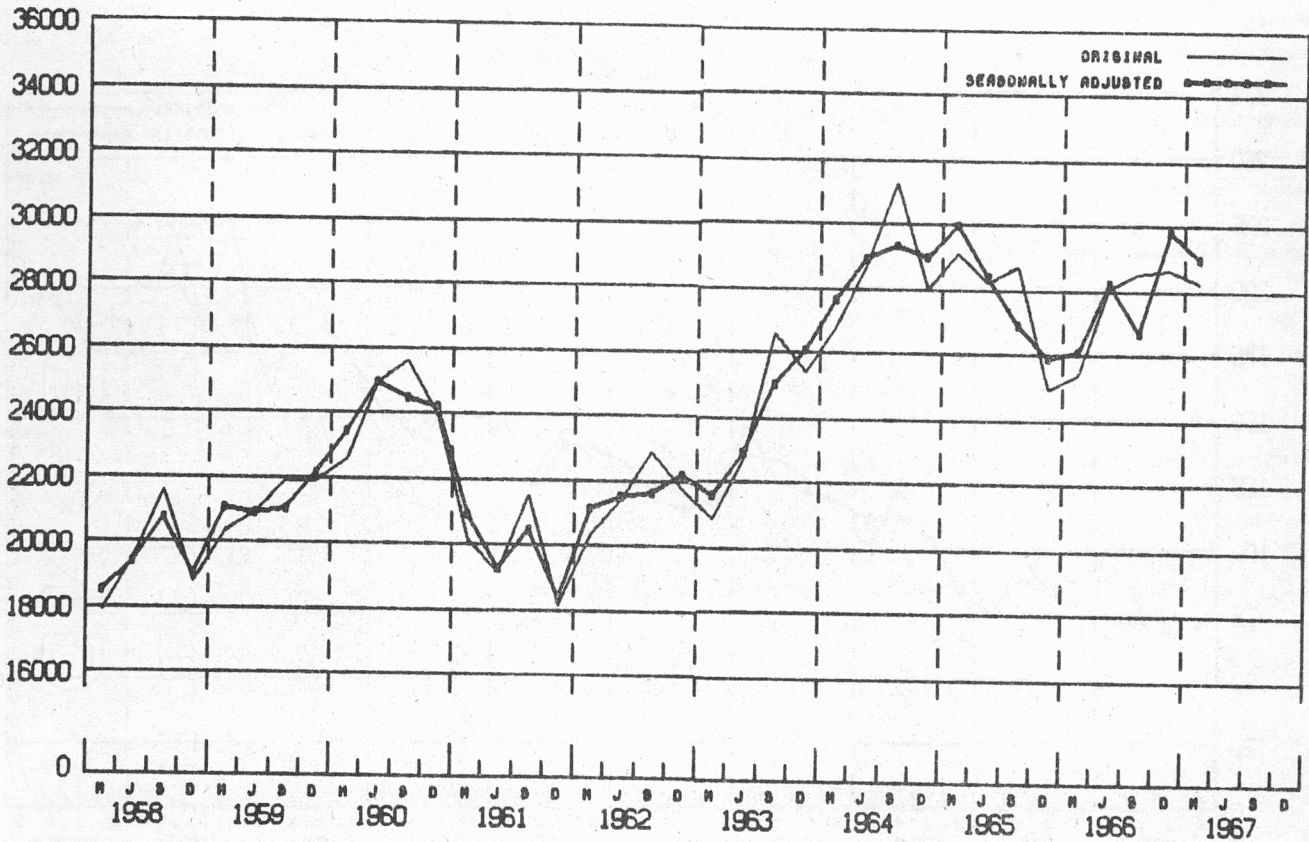
YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
ORIGINAL												
1958	65.9	66.6	83.4	78.7	79.0	86.8	92.4	88.3	90.1	81.0	71.5	66.6
1959	62.3	75.1	80.6	95.9	87.1	100.7	92.1	90.7	107.3	115.0	102.7	86.7
1960	72.6	87.0	119.9	94.8	121.2	117.4	117.8	118.2	122.6	119.0	122.7	88.5
1961	69.1	82.8	87.2	66.4	106.1	103.9	87.4	109.2	106.4	99.5	108.4	80.0
1962	77.3	90.3	107.8	99.0	111.3	96.0	125.1	111.6	112.9	117.3	109.2	80.6
1963	101.3	93.4	104.9	115.5	129.6	114.8	120.9	138.8	142.5	134.6	120.6	103.8
1964	111.7	107.6	133.5	165.4	126.9	167.1	139.8	147.9	156.3	144.3	140.7	162.0
1965	133.8	136.3	163.3	139.4	154.5	173.0	151.6	160.5	166.8	156.7	150.2	130.4
1966	90.2	118.5	158.1	115.3	154.4	182.1	157.2	148.6	144.5	162.9	155.0	119.6
1967	129.0	147.7	142.4	153.6	195.1							
SEASONALLY ADJUSTED												
1958	81.9	74.4	82.0	82.1	74.4	80.2	86.0	86.5	78.0	74.2	75.4	76.4
1959	81.0	84.5	86.9	86.7	85.9	88.9	86.0	88.7	92.8	110.0	102.9	99.7
1960	94.0	98.0	108.2	102.3	114.1	103.8	120.9	105.0	106.3	119.0	117.3	106.2
1961	88.9	94.9	84.1	70.2	95.5	91.4	89.6	97.1	97.4	94.4	103.4	100.6
1962	94.7	103.6	102.3	107.6	99.7	88.0	122.4	99.7	109.1	105.5	104.0	101.5
1963	124.0	107.2	104.9	120.6	115.3	109.9	112.8	130.3	131.9	120.0	120.5	125.3
1964	135.8	123.0	147.5	151.5	123.2	144.4	130.8	145.5	138.3	134.1	141.4	187.3
1965	168.7	162.3	151.1	146.7	150.3	148.5	148.4	150.4	147.7	152.3	145.5	151.2
1966	117.4	135.4	146.5	127.7	143.6	155.4	161.1	133.2	128.6	157.8	151.0	145.1
1967	158.8	168.6	151.1	157.4	173.3							

BUILDING APPROVALS ARE AFFECTED BY LARGE PROJECTS SUCH AS MULTI-STOREY OFFICE BUILDINGS APPROVED IN PARTICULAR MONTHS.

NOTE - ALL SEASONALLY ADJUSTED FIGURES ARE SUBJECT TO REVISION.



NEW HOUSES AND FLATS COMMENCED - NUMBER

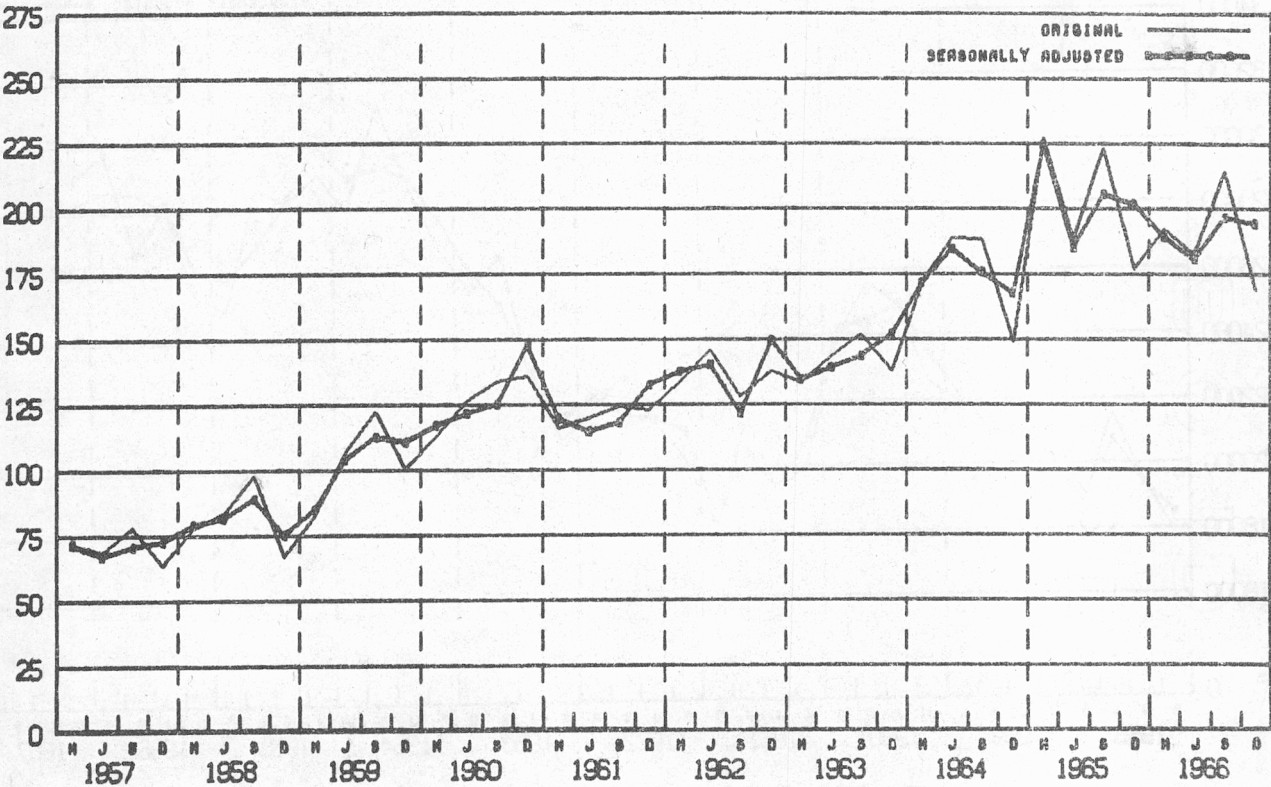


YEAR	QUARTERS ENDED-			
	MAR	JUN	SEP	DEC
	ORIGINAL			
1958	17886	19493	21597	18782
1959	20350	20958	21918	21900
1960	22569	24957	25638	23926
1961	20136	19189	21547	18172
1962	20344	21403	22902	21769
1963	20849	22749	26608	25413
1964	26807	28752	31312	28032
1965	29131	28234	28741	24954
1966	25401	28108	28529	28675
1967	28276P			
SEASONALLY ADJUSTED				
1958	18483	19387	20760	19026
1959	21044	20889	21017	22138
1960	23402	24951	24477	24181
1961	20912	19240	20478	18395
1962	21138	21515	21630	22191
1963	21592	22891	25016	26093
1964	27677	28938	29332	28983
1965	29992	28382	26898	25895
1966	26112	28236	26680	29839
1967	28999P			

(P) PRELIMINARY ESTIMATE.

NOTE - ALL SEASONALLY ADJUSTED FIGURES ARE SUBJECT TO REVISION.

NEW BUILDINGS, OTHER THAN NEW HOUSES AND FLATS, COMMENCED - VALUE  
\$ MILLION



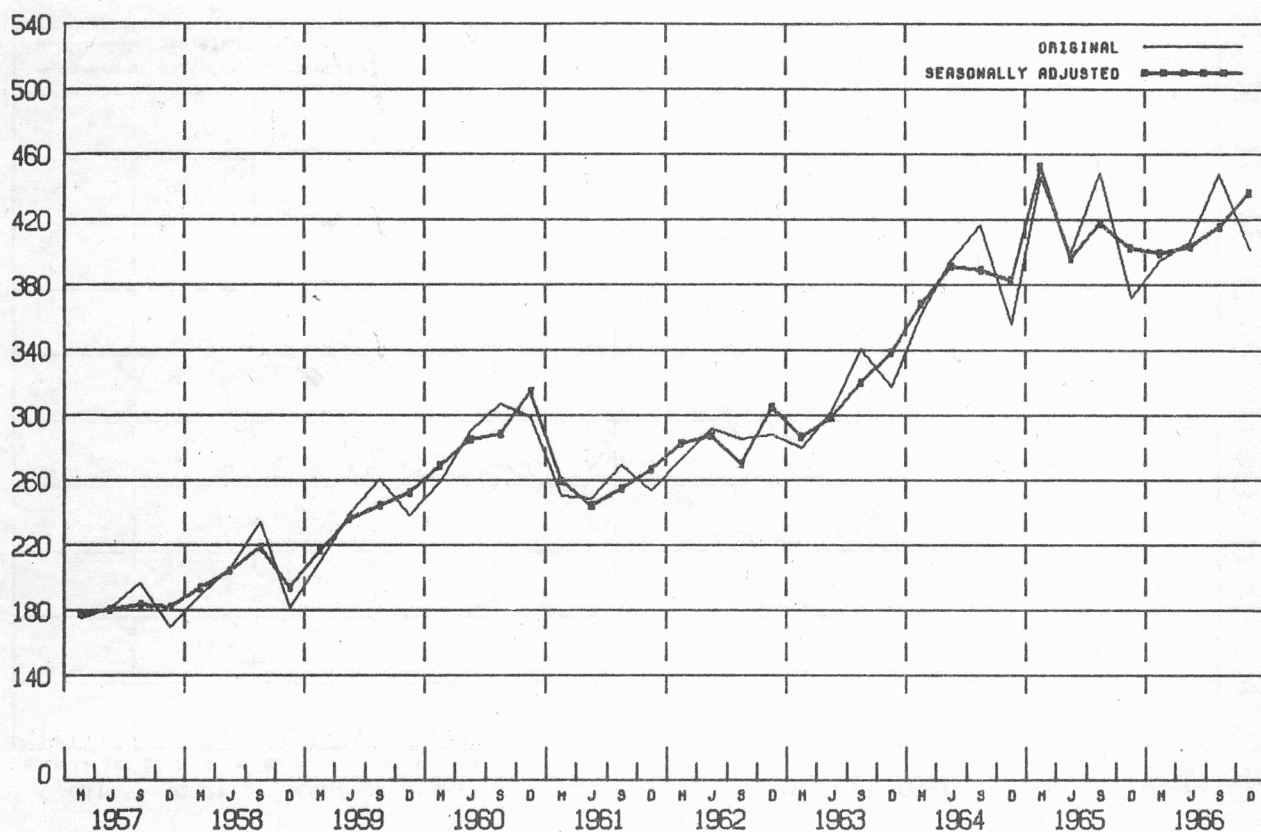
YEAR	QUARTERS ENDED-			
	MAR	JUN	SEP	DEC
	ORIGINAL			
1957	71.3	68.6	78.2	63.6
1958	77.8	83.3	98.1	66.9
1959	83.0	107.2	122.4	100.6
1960	112.9	126.5	134.1	135.9
1961	115.8	119.8	124.6	123.1
1962	134.0	145.8	128.1	137.8
1963	133.3	143.7	152.2	138.0
1964	172.2	189.0	188.6	149.0
1965	227.5	188.3	223.3	177.0
1966	192.6	182.9	214.4	168.9
YEAR	SEASONALLY ADJUSTED			
	MAR	JUN	SEP	DEC
	ORIGINAL			
1957	71.4	67.1	70.5	72.3
1958	78.9	81.4	88.9	74.9
1959	85.1	103.8	112.5	110.6
1960	116.8	121.4	125.2	147.4
1961	119.7	114.6	117.9	132.7
1962	137.3	139.9	121.6	149.5
1963	134.7	139.0	143.6	152.0
1964	171.6	184.6	175.6	167.3
1965	224.3	185.2	205.6	201.5
1966	188.8	180.6	196.3	193.8

NOTE - ALL SEASONALLY ADJUSTED FIGURES ARE SUBJECT TO REVISION.

41.

## TOTAL NEW BUILDINGS COMMENCED - VALUE

\$ MILLION

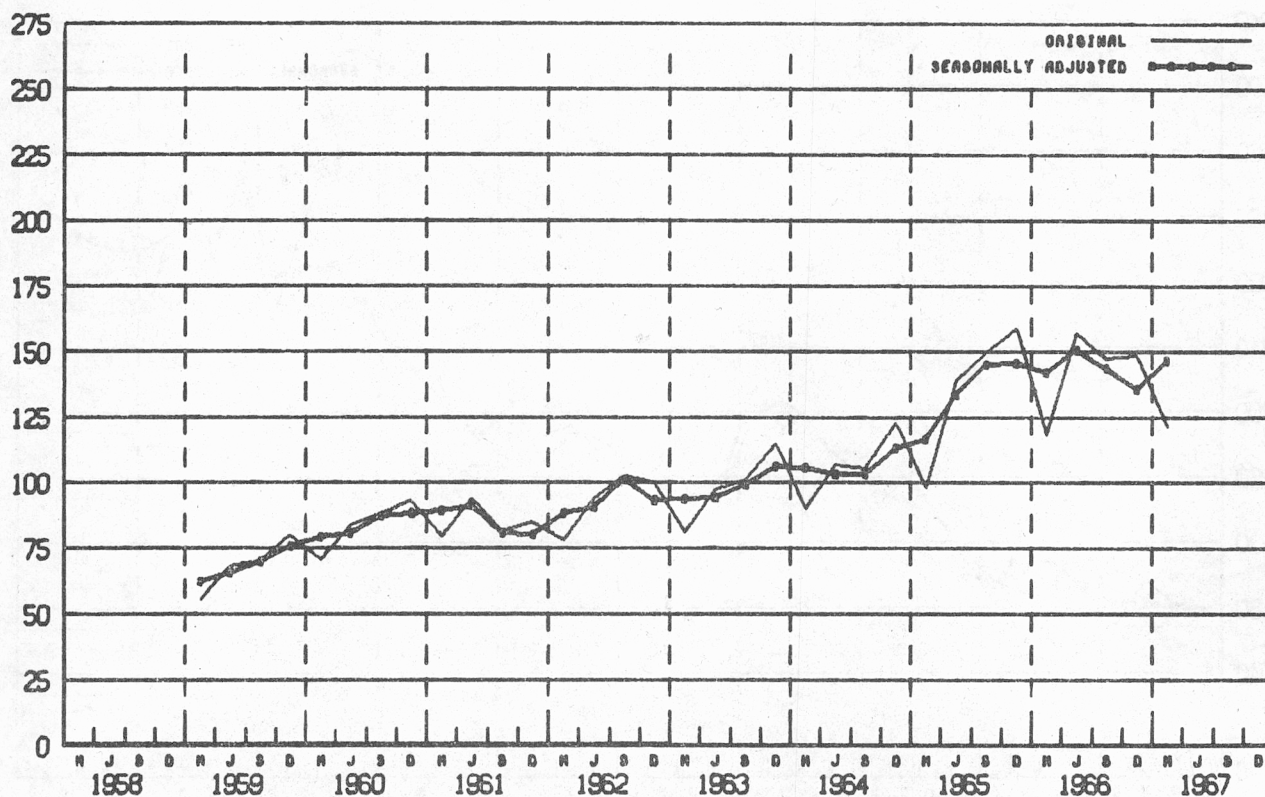


YEAR	QUARTERS ENDED-			
	MAR	JUN	SEP	DEC
	ORIGINAL			
1957	174.6	180.9	196.5	169.6
1958	189.1	209.8	234.0	181.1
1959	210.4	239.3	260.6	237.9
1960	259.2	290.2	306.5	298.6
1961	250.4	248.5	269.3	253.2
1962	273.4	291.8	285.5	288.0
1963	279.3	302.1	340.4	317.3
1964	361.8	395.1	416.1	355.3
1965	445.9	399.1	448.7	371.6
1966	394.5	406.1	447.6	401.1
YEAR	SEASONALLY ADJUSTED			
	MAR	JUN	SEP	DEC
1957	177.3	179.2	182.9	181.3
1958	193.5	203.3	217.6	192.9
1959	216.8	235.4	243.4	251.7
1960	268.2	284.7	287.8	314.4
1961	259.0	243.6	254.1	265.8
1962	281.7	287.0	269.0	304.1
1963	285.9	297.9	319.7	337.7
1964	368.0	390.9	388.3	381.9
1965	451.4	395.3	417.3	401.6
1966	398.5	402.8	414.9	435.5

NOTE - ALL SEASONALLY ADJUSTED FIGURES ARE SUBJECT TO REVISION.



CAPITAL EXPENDITURE BY PRIVATE BUSINESSES(A) - NEW BUILDINGS AND STRUCTURES  
\$ MILLION



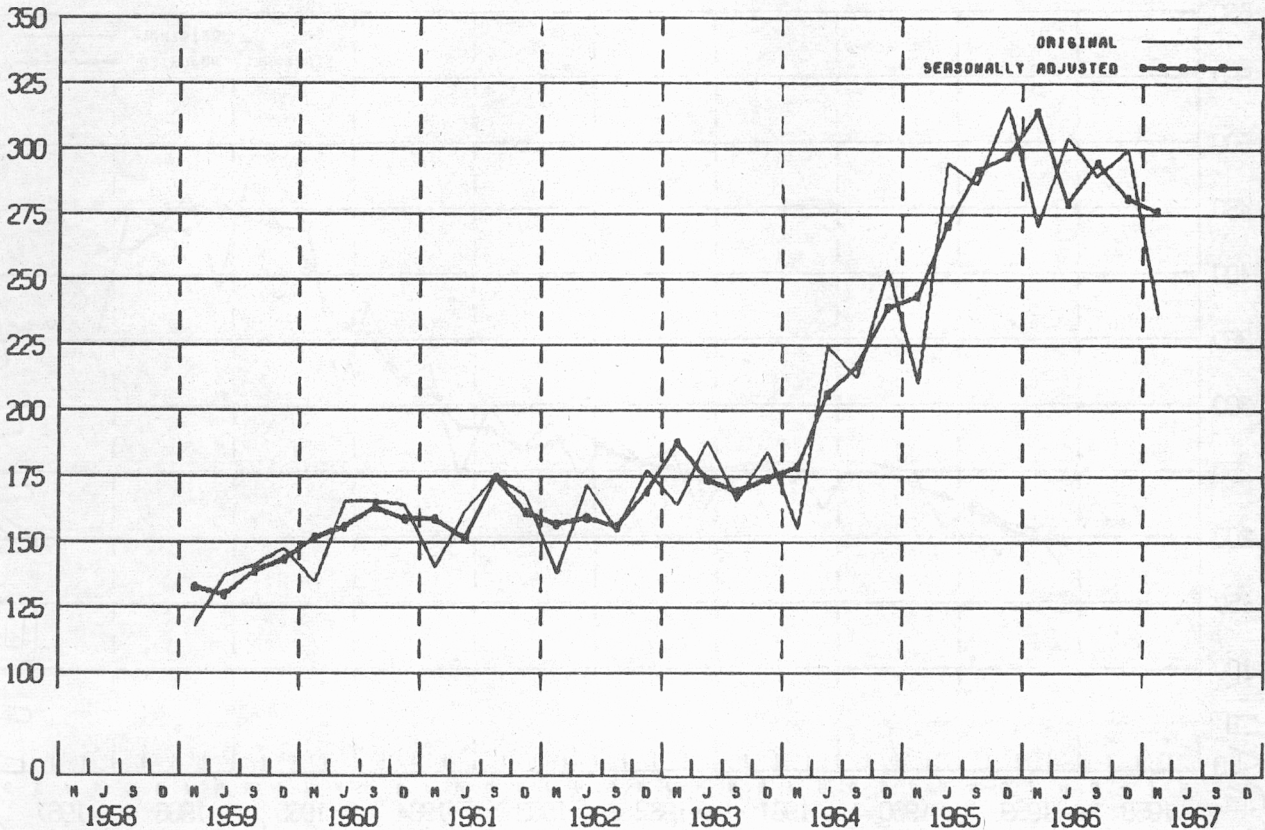
YEAR	QUARTERS ENDED-			
	MAR	JUN	SEP	DEC
ORIGINAL				
1959	55.6	68.2	70.0	79.8
1960	70.6	83.8	87.8	93.0
1961	79.4	94.0	81.6	85.2
1962	77.8	93.8	102.6	100.2
1963	81.2	97.4	100.9	115.1
1964	90.2	107.1	105.6	123.1
1965	98.2	138.8	149.4	158.9
1966	118.3	157.3	147.7	148.4
1967	121.4P			
SEASONALLY ADJUSTED				
1959	62.1	65.5	69.4	75.6
1960	78.9	80.7	87.0	87.8
1961	89.0	90.8	80.6	79.8
1962	88.2	90.7	101.1	93.0
1963	93.4	94.1	98.9	106.1
1964	105.6	103.2	103.1	112.9
1965	116.7	133.3	145.2	145.4
1966	141.9	150.6	143.4	135.7
1967	146.4P			

(A) SEE EXPLANATORY NOTES.

(P) PRELIMINARY ESTIMATE.

NOTE - ALL SEASONALLY ADJUSTED FIGURES ARE SUBJECT TO REVISION.

CAPITAL EXPENDITURE BY PRIVATE BUSINESSES(A) - OTHER NEW CAPITAL EQUIPMENT(B)  
\$ MILLION



YEAR	QUARTERS ENDED-			
	MAR	JUN	SEP	DEC
	ORIGINAL			
1959	117.8	137.2	141.0	147.6
1960	134.6	165.6	165.4	164.0
1961	140.6	161.8	174.8	167.6
1962	137.8	171.8	154.2	177.6
1963	163.8	188.6	166.1	184.3
1964	153.2	224.6	212.7	254.2
1965	210.6	295.0	286.4	316.3
1966	270.4	304.3	289.6	299.5
1967	236.9P			
YEAR	SEASONALLY ADJUSTED			
	MAR	JUN	SEP	DEC
	ORIGINAL			
1959	132.6	129.3	138.4	143.2
1960	151.5	155.6	163.2	158.5
1961	158.7	150.9	174.4	160.8
1962	156.5	159.0	155.5	169.1
1963	187.4	173.4	168.9	174.2
1964	178.5	206.0	216.8	239.2
1965	243.6	270.5	291.6	297.0
1966	314.1	278.9	294.4	281.1
1967	276.1P			

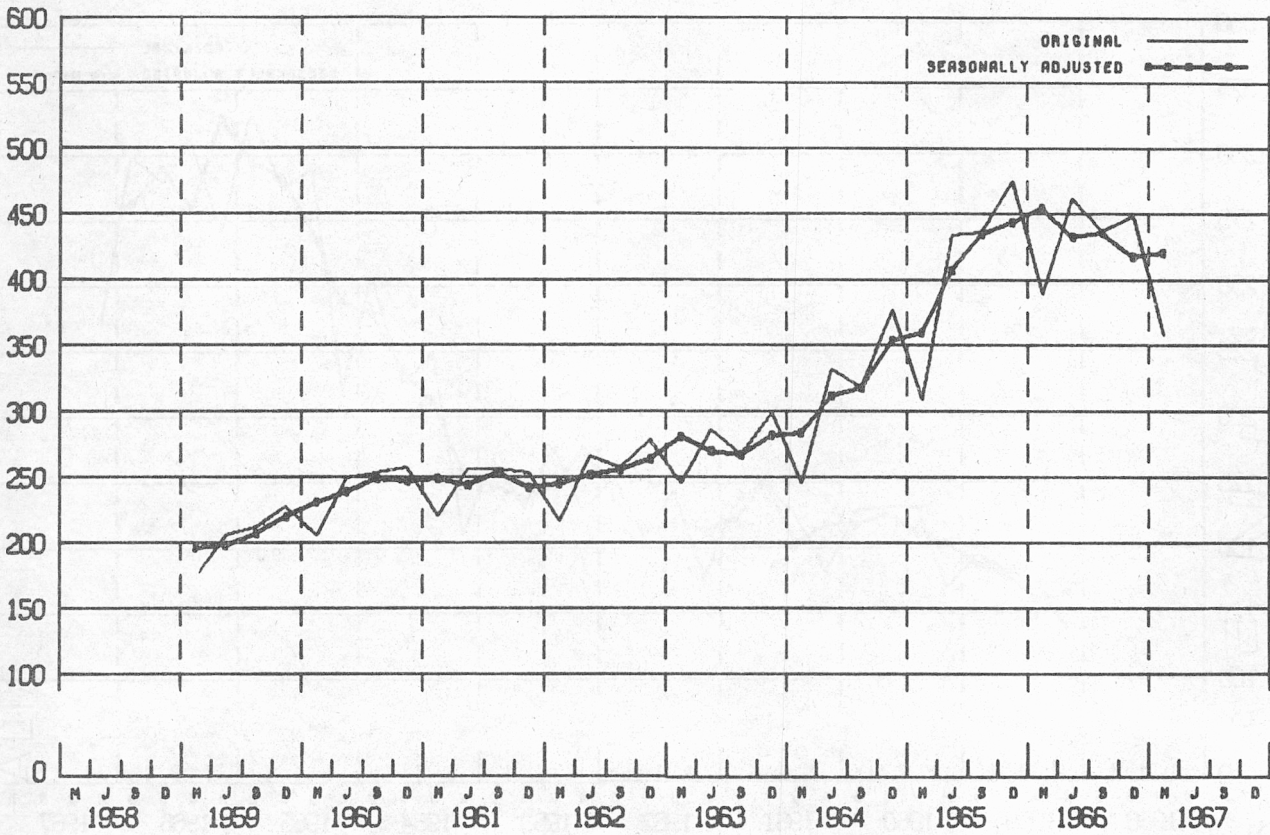
(A) SEE EXPLANATORY NOTES.

(B) OTHER THAN BUILDINGS AND STRUCTURES.

(P) PRELIMINARY ESTIMATE.

NOTE - ALL SEASONALLY ADJUSTED FIGURES ARE SUBJECT TO REVISION.

CAPITAL EXPENDITURE BY PRIVATE BUSINESSES(A) - TOTAL NEW CAPITAL EXPENDITURE  
\$ MILLION



YEAR	QUARTERS ENDED-			
	MAR	JUN	SEP	DEC
	ORIGINAL			
1959	173.4	205.4	211.0	227.4
1960	205.2	249.4	253.2	257.0
1961	220.0	255.8	256.4	252.8
1962	215.6	265.6	256.8	277.8
1963	245.0	286.0	267.0	299.4
1964	245.4	331.7	318.3	377.3
1965	308.8	433.8	435.8	475.2
1966	388.7	461.6	437.3	447.9
1967	358.3P			
YEAR	SEASONALLY ADJUSTED			
	MAR	JUN	SEP	DEC
	ORIGINAL			
1959	194.5	196.5	206.2	218.6
1960	230.2	238.3	248.2	246.4
1961	247.6	243.4	252.8	240.9
1962	244.3	251.3	254.8	262.7
1963	280.3	269.2	265.9	281.4
1964	283.1	311.4	317.4	352.8
1965	359.0	406.7	434.1	443.2
1966	454.4	432.3	435.2	417.4
1967	420.2P			

(A) SEE EXPLANATORY NOTES.

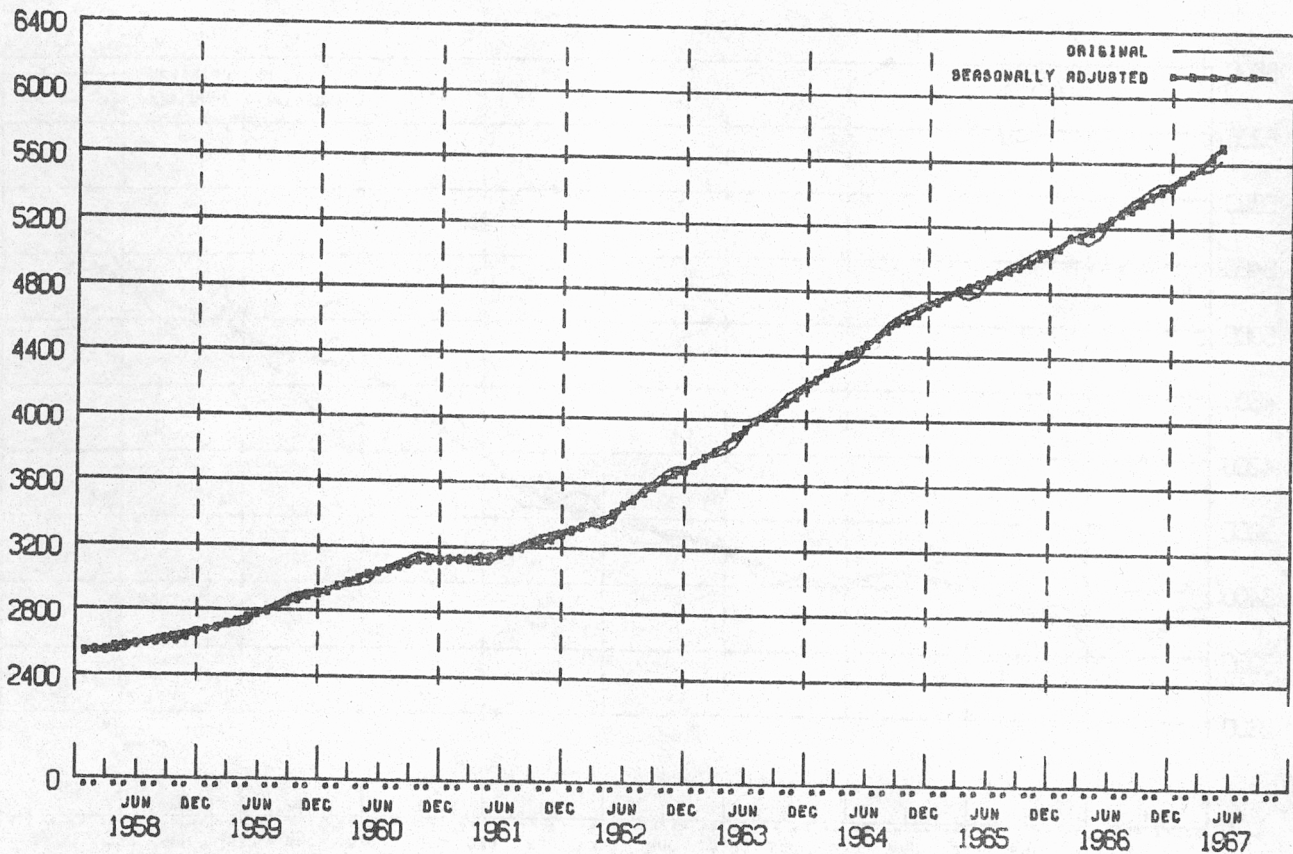
(P) PRELIMINARY ESTIMATE.

NOTE - ALL SEASONALLY ADJUSTED FIGURES ARE SUBJECT TO REVISION.



SAVINGS BANK DEPOSITS (A)

\$ MILLION

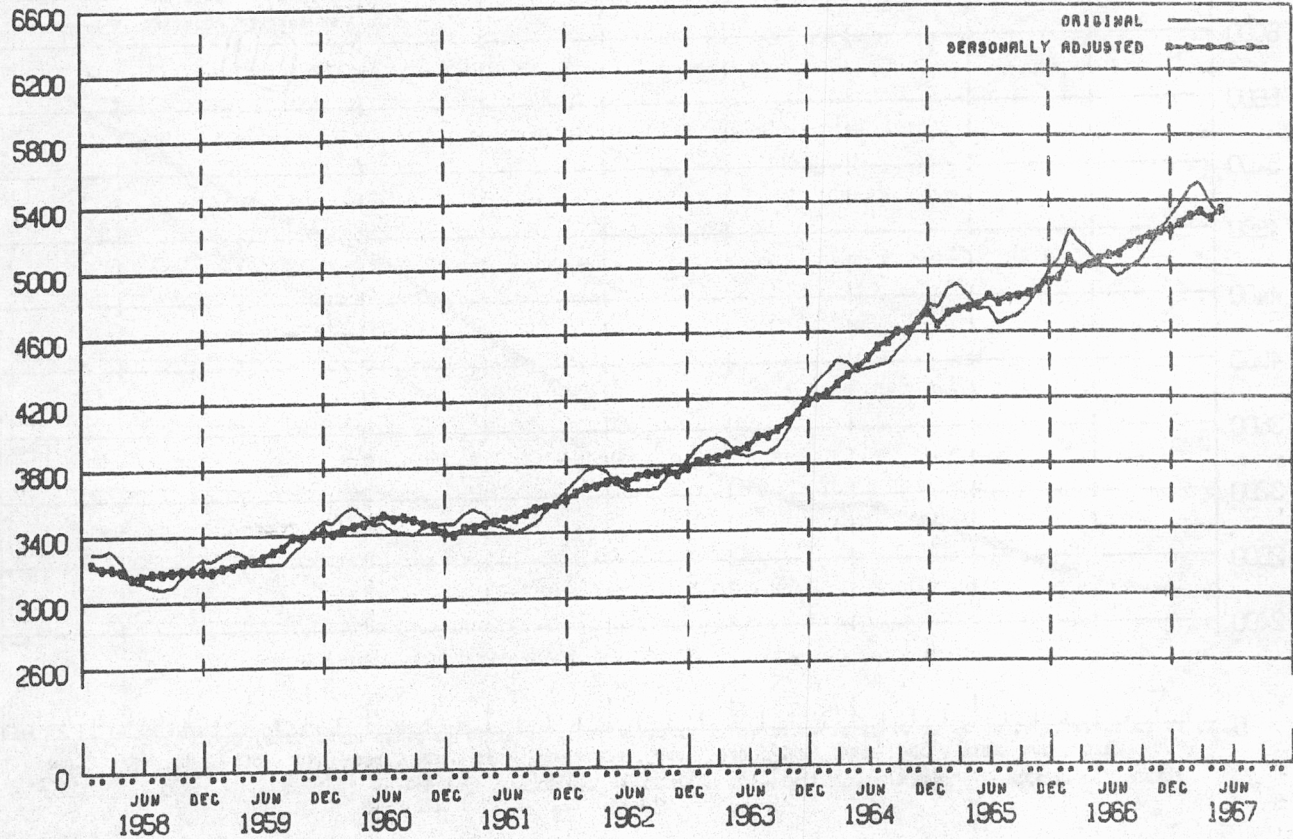


YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
ORIGINAL												
1958	2539.0	2538.8	2534.5	2539.7	2542.3	2593.7	2609.7	2621.7	2640.4	2650.0	2665.9	2674.9
1959	2677.2	2689.3	2698.6	2700.7	2714.5	2782.7	2807.8	2839.2	2878.7	2907.3	2922.4	2921.0
1960	2926.4	2947.6	2954.5	2960.8	2979.5	3045.4	3073.1	3101.7	3126.3	3161.5	3154.6	3133.9
1961	3127.4	3121.6	3103.0	3098.6	3095.6	3154.9	3189.2	3218.6	3250.1	3270.6	3287.5	3301.1
1962	3309.5	3329.9	3340.2	3327.4	3357.7	3469.8	3512.3	3578.0	3614.3	3672.5	3701.8	3705.3
1963	3727.4	3764.6	3775.4	3791.1	3840.4	3939.7	4008.6	4048.6	4085.5	4159.4	4192.3	4225.0
1964	4260.0	4302.5	4320.0	4346.0	4374.3	4476.2	4535.4	4597.3	4644.7	4683.3	4704.5	4734.2
1965	4749.1	4782.6	4781.7	4757.8	4785.8	4886.6	4922.4	4967.9	4994.2	5034.4	5065.0	5066.1
1966	5084.9	5141.8	5117.6	5102.1	5140.5	5253.7	5307.7	5356.4	5391.4	5448.5	5474.4	5471.4
1967	5511.7	5544.4	5551.3	5558.2	5622.7							
SEASONALLY ADJUSTED												
1958	2542.0	2549.4	2555.1	2574.8	2583.8	2592.2	2603.2	2606.4	2615.5	2619.2	2640.5	2665.4
1959	2680.1	2699.7	2721.4	2739.1	2759.4	2782.3	2800.6	2821.8	2852.0	2872.7	2893.5	2910.1
1960	2929.4	2957.8	2980.1	3004.7	3029.4	3046.2	3065.1	3081.6	3098.3	3123.1	3122.8	3121.9
1961	3130.1	3130.9	3130.1	3146.1	3147.6	3156.7	3180.9	3196.6	3222.5	3231.4	3254.2	3288.5
1962	3311.7	3337.8	3368.5	3379.9	3413.4	3472.2	3503.1	3552.8	3585.7	3630.2	3665.7	3691.3
1963	3728.6	3770.8	3805.6	3851.7	3902.6	3942.2	3998.1	4020.3	4055.8	4114.3	4153.4	4210.0
1964	4259.8	4306.4	4352.3	4415.6	4442.6	4478.3	4523.3	4566.7	4613.5	4635.7	4663.3	4718.5
1965	4747.1	4784.1	4815.1	4833.5	4857.8	4888.6	4909.3	4936.7	4962.2	4985.9	5022.1	5050.7
1966	5081.2	5141.5	5151.7	5182.6	5216.1	5256.1	5293.6	5323.9	5357.3	5398.1	5428.9	5454.8
1967	5506.9	5543.3	5586.9	5645.6	5705.3							

(A) DEPOSITS AT END OF MONTH - ALL SAVINGS BANKS. SEE EXPLANATORY NOTES.

NOTE - ALL SEASONALLY ADJUSTED FIGURES ARE SUBJECT TO REVISION.

MAJOR TRADING BANKS - TOTAL DEPOSITS (A)  
\$ MILLION



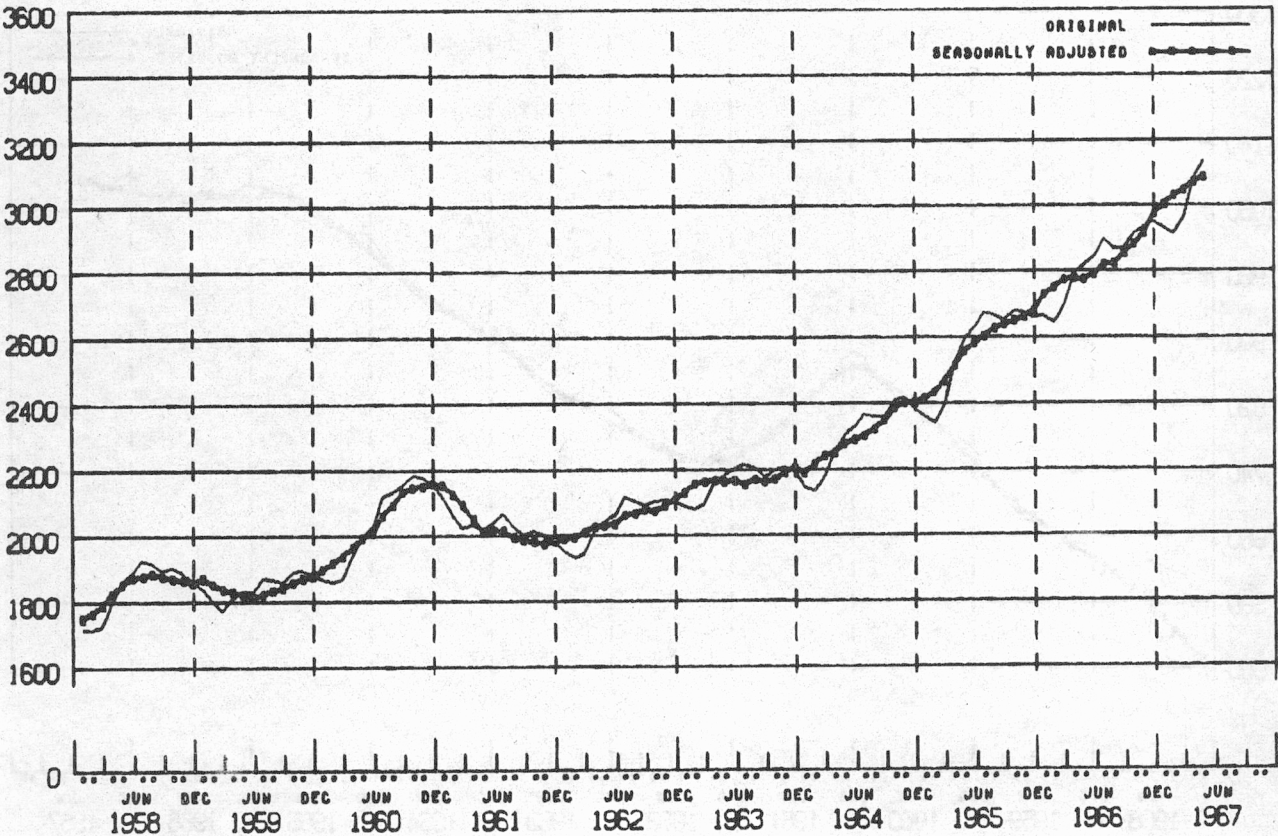
YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
ORIGINAL												
1958	3299.1	3295.6	3317.0	3250.8	3130.1	3116.6	3095.4	3078.3	3091.3	3159.7	3204.5	3252.1
1959	3246.5	3290.6	3323.4	3295.6	3224.8	3224.9	3221.6	3227.2	3293.8	3353.4	3421.4	3481.6
1960	3471.0	3532.1	3567.6	3520.9	3458.3	3462.3	3412.2	3404.3	3392.9	3438.9	3462.7	3455.1
1961	3459.3	3521.0	3542.7	3516.5	3444.6	3430.3	3402.0	3421.1	3456.6	3531.1	3580.8	3647.6
1962	3713.8	3773.4	3790.7	3766.4	3685.7	3648.3	3645.5	3644.6	3653.2	3733.0	3750.2	3831.4
1963	3902.3	3952.8	3970.5	3935.0	3863.8	3846.9	3874.9	3863.4	3913.8	4015.9	4121.0	4225.3
1964	4302.1	4368.9	4428.1	4418.9	4356.6	4378.2	4389.4	4411.6	4487.6	4551.3	4674.9	4779.0
1965	4749.7	4874.9	4899.6	4826.4	4736.2	4746.4	4651.6	4678.0	4705.2	4778.1	4865.9	4978.8
1966	5048.8	5222.8	5153.1	5096.0	5010.3	4992.8	4938.5	4983.7	5029.4	5125.3	5217.9	5297.9
1967	5382.9	5489.2	5515.9	5372.9	5310.2							
SEASONALLY ADJUSTED												
1958	3236.7	3209.0	3207.8	3193.9	3152.8	3163.8	3178.9	3179.6	3186.0	3188.5	3193.5	3195.2
1959	3186.0	3206.2	3218.6	3239.9	3250.2	3275.6	3305.9	3326.5	3388.3	3381.4	3406.9	3427.6
1960	3407.5	3441.0	3459.2	3461.6	3485.5	3517.3	3499.3	3503.9	3485.9	3467.9	3451.8	3407.5
1961	3394.1	3428.2	3437.6	3456.7	3470.2	3485.6	3487.9	3518.7	3548.4	3563.8	3572.9	3602.8
1962	3641.2	3669.4	3677.9	3701.8	3711.6	3707.3	3739.3	3749.2	3749.0	3772.1	3745.3	3785.5
1963	3821.6	3838.0	3850.4	3667.9	3890.5	3910.2	3978.2	3975.9	4016.3	4062.4	4117.1	4174.3
1964	4210.2	4234.8	4290.4	4346.1	4387.2	4450.7	4511.6	4542.2	4605.1	4608.1	4671.0	4717.9
1965	4646.2	4719.6	4743.6	4750.6	4771.0	4824.3	4785.4	4817.7	4827.9	4840.0	4861.0	4913.7
1966	4939.2	5052.5	4985.7	5019.7	5047.8	5073.5	5083.4	5133.4	5159.3	5193.1	5212.5	5227.7
1967	5266.8	5308.1	5335.5	5294.2	5349.9							

(A) AVERAGE OF THE FIGURES RELATING TO WEEKLY BALANCE DAYS (WEDNESDAYS) DURING THE MONTH.

NOTE - ALL SEASONALLY ADJUSTED FIGURES ARE SUBJECT TO REVISION.



MAJOR TRADING BANKS - LOANS, ADVANCES AND BILLS DISCOUNTED (A)  
\$ MILLION



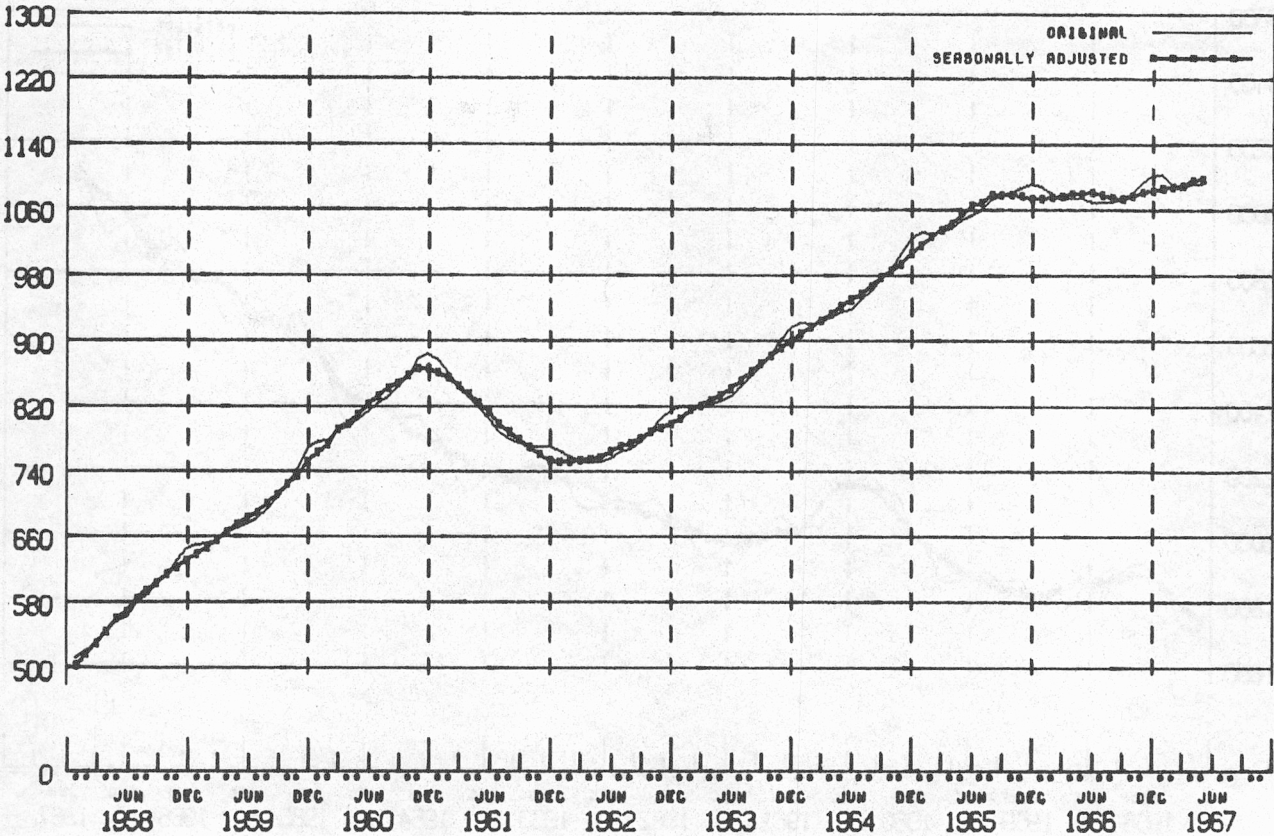
YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
ORIGINAL												
1958	1721.1	1714.2	1725.4	1805.5	1865.8	1891.3	1928.3	1919.9	1897.7	1904.1	1893.7	1864.4
1959	1840.8	1798.4	1771.3	1810.2	1830.9	1832.6	1872.2	1867.2	1859.3	1890.4	1897.5	1884.1
1960	1868.6	1860.4	1869.2	1945.5	2000.9	2030.1	2120.5	2132.1	2155.1	2184.4	2179.0	2160.7
1961	2117.1	2060.7	2023.1	2033.7	2020.7	2040.1	2069.9	2029.2	2001.6	2014.5	1998.1	1983.4
1962	1953.5	1930.4	1943.9	2017.6	2044.0	2062.7	2121.8	2104.2	2093.1	2103.6	2109.3	2104.2
1963	2089.2	2081.5	2096.2	2164.0	2182.5	2202.3	2216.5	2207.2	2175.7	2199.7	2203.8	2196.7
1964	2142.6	2137.4	2177.7	2256.1	2305.7	2333.2	2367.5	2358.9	2360.5	2412.2	2417.4	2385.9
1965	2361.2	2342.0	2397.5	2524.3	2594.1	2631.1	2674.8	2666.3	2651.8	2678.2	2676.8	2660.9
1966	2665.9	2642.7	2697.8	2792.1	2818.5	2845.0	2900.8	2866.2	2866.2	2915.2	2930.6	2952.3
1967	2934.0	2911.6	2961.9	3085.6	3136.6							
SEASONALLY ADJUSTED												
1958	1752.4	1768.2	1793.1	1828.7	1857.3	1875.1	1879.9	1887.3	1880.9	1871.0	1867.8	1861.1
1959	1872.6	1856.0	1841.5	1832.3	1824.3	1816.9	1823.3	1834.4	1843.5	1858.2	1873.2	1882.0
1960	1900.1	1920.3	1941.7	1966.3	1994.8	2012.4	2064.2	2094.4	2137.9	2148.9	2153.6	2159.8
1961	2154.1	2129.1	2097.5	2050.5	2013.4	2019.7	2014.9	1994.1	1987.2	1983.8	1977.9	1985.5
1962	1990.1	1997.1	2011.1	2028.1	2032.6	2037.7	2065.4	2068.9	2080.3	2074.7	2090.5	2110.8
1963	2132.0	2158.1	2163.9	2167.8	2164.3	2169.9	2157.2	2171.8	2164.4	2173.0	2193.9	2208.5
1964	2190.1	2220.0	2244.4	2253.2	2280.1	2293.6	2304.2	2322.0	2350.3	2386.1	2404.0	2402.8
1965	2416.5	2436.5	2468.1	2515.9	2559.9	2582.5	2603.0	2626.3	2641.8	2650.5	2663.6	2682.3
1966	2730.1	2751.9	2776.3	2779.8	2777.9	2790.5	2822.9	2824.3	2856.2	2884.9	2916.8	2977.3
1967	3005.2	3033.5	3047.8	3070.2	3090.0							

(A) EXCLUDES LOANS TO DEALERS IN THE SHORT TERM MONEY MARKET. AVERAGE OF THE FIGURES RELATING TO WEEKLY BALANCE DAYS (WEDNESDAYS) DURING THE MONTH.

NOTE - ALL SEASONALLY ADJUSTED FIGURES ARE SUBJECT TO REVISION.



INSTALMENT CREDIT FOR RETAIL SALES  
NOV-RETAIL FINANCE BUSINESSES - BALANCES OUTSTANDING (A)  
\$ MILLION



YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
ORIGINAL												
1958	510.8	520.2	529.2	543.2	556.8	563.0	577.7	587.6	600.5	613.9	629.2	645.1
1959	650.2	651.6	655.4	664.5	671.8	676.7	683.2	693.4	708.0	724.5	743.3	769.0
1960	776.4	779.0	790.6	795.2	804.3	813.6	823.2	831.8	843.8	857.2	876.9	884.6
1961	876.7	859.6	843.2	830.5	818.4	803.5	789.8	780.8	775.8	770.8	770.9	770.9
1962	766.2	757.8	752.4	750.7	751.2	756.3	764.3	768.0	777.4	790.7	803.3	814.6
1963	819.3	820.1	819.7	822.6	827.2	832.5	844.1	856.1	869.9	883.4	902.4	916.7
1964	923.1	921.2	922.8	928.3	935.6	939.2	949.0	960.7	975.7	988.5	1005.3	1025.0
1965	1032.1	1030.7	1032.3	1038.2	1046.5	1054.1	1060.6	1072.2	1077.9	1081.7	1087.2	1092.8
1966	1088.9	1078.5	1073.5	1074.4	1075.1	1070.2	1069.8	1069.0	1072.8	1080.3	1092.4	1102.3
1967	1103.2	1090.3	1085.1	1091.6B	1092.0C							
SEASONALLY ADJUSTED												
1958	502.7	516.9	529.6	544.9	560.4	569.6	584.2	594.0	604.4	615.3	623.4	631.5
1959	639.7	647.6	656.3	667.0	676.3	684.6	690.9	701.5	712.9	725.5	735.6	752.6
1960	763.6	774.2	792.1	798.9	810.0	823.2	832.5	841.7	849.4	857.6	867.0	865.9
1961	862.0	854.5	845.1	835.2	824.6	813.3	798.5	789.6	780.3	770.6	761.9	755.2
1962	753.5	753.6	754.3	755.6	757.3	765.6	772.4	775.7	780.8	789.9	794.1	799.0
1963	806.3	816.0	822.1	828.3	833.7	842.7	852.4	863.4	872.7	882.1	892.7	900.4
1964	909.2	917.5	926.1	934.4	942.4	950.5	957.9	967.7	978.0	986.7	995.2	1007.9
1965	1017.4	1027.5	1036.5	1044.3	1053.3	1066.4	1070.3	1079.1	1080.0	1079.7	1076.9	1075.1
1966	1073.7	1075.9	1078.3	1080.1	1081.5	1082.4	1079.5	1075.6	1074.6	1078.3	1082.4	1084.7
1967	1088.0	1088.0	1090.2	1097.0B	1098.1C							

(A) FIGURES RELATE TO END OF MONTH AND INCLUDE HIRING CHARGES, INTEREST, INSURANCE, ETC.

(B) PRELIMINARY ESTIMATES, SUBJECT TO REVISION.

(C) PROVISIONAL ESTIMATE, SUBJECT TO REVISION.      ROUNDED TO NEAREST MILLION DOLLARS.

NOTE - ALL SEASONALLY ADJUSTED FIGURES ARE SUBJECT TO REVISION.

# APPENDIX A

## EXPLANATORY NOTES AND PUBLICATIONS FOR FURTHER REFERENCE

The notes below provide further information on the nature of the series and references to publications for further details. The publications referred to are those monthly and quarterly statements in which subsequent seasonally adjusted figures are to be published.

Subsequent seasonally adjusted figures will also be included in the "Monthly Review of Business Statistics" and a selection will be included in the "Digest of Current Economic Statistics".

Series	Page	Explanatory Notes	Publications for further reference
<u>PRODUCTION</u>			
Electricity	1	Total generated, including electricity not for sale.	Production Statistics .. monthly
Gas	2	Total produced in gasworks. 1 Therm = 100,000 British Thermal Units.	Production Statistics - Preliminary .. monthly
Cement	3	Portland cement.	
Electric motors under 1 h.p.	4	Includes those made and incorporated by manufacturers in their own products.	
Cotton woven cloth	5	Cotton woven cloth (including mixtures predominantly of cotton) over 12" wide.	
Woollen and worsted woven cloth	6	Woollen woven cloth (including mixtures predominantly of wool) over 12" wide.	
Boots and shoes	7	Includes sandals and moulded plastic footwear, but excludes slippers, rubber thongs, sandshoes, galoshes and rubber gum boots.	Production Statistics .. monthly
Meat	8	In terms of fresh meat (carcass weight). Total production including estimates of meat from animals slaughtered on farms.	The Meat Industry .. monthly
Whole milk	9		The Dairying Industry .. monthly
<u>OVERSEAS TRADE</u>			
Imports	10	Total value of imports recorded in month.	Overseas Trade Statistics Parts 1 & 2 .. monthly
Exports	11	Total value of exports recorded in month.	Overseas Trade - Preliminary.. monthly

Series	Page	Explanatory Notes	Publications for further reference
<u>EMPLOYMENT</u>			
<u>Wage and Salary Earners in Civilian Employment</u>			
Males	12-15	Original data, except those relating to government employees, are based on comprehensive figures from the population censuses of June 1954 and June 1961. Estimates for other months are derived from current pay-roll tax returns, returns of government employment, other direct records of employment, and estimates of the number of employees not covered by these collections. Employees in rural industry and private domestic service and defence forces are excluded. The figures are not directly comparable with statistics derived from the 1966 population census for which new work force definitions were adopted.	Employment and Unemployment .. monthly
Females			Wage and Salary Earners in Civilian Employment - Preliminary .. monthly
Persons			
Private - Persons			
Government - Persons	16	The figures for government employees include all civilian employees, within Australia, of government bodies (Commonwealth, State, local and semi-government) in services such as railways, tramways, banks, post office, air transport, education (including universities), broadcasting, television, police, public works, factories and munitions establishments, departmental hospitals and institutions, migrant hostels, etc., as well as employees of Administrative departments and authorities.	
Manufacturing - Persons	17	Includes employees of manufacturing establishments who are engaged in selling and distribution, etc., as well as those engaged directly in manufacturing activity.	
Commerce - Persons	18		



Series	Page	Explanatory Notes	Publications for further reference
<u>Number Receiving Unemployment Benefit</u> Males Females Persons	19-21	Excludes persons receiving sickness or special benefits and persons receiving the special benefits paid to migrants in reception and training centres.	Employment and Unemployment .. monthly
<u>Number Registered for Employment</u> Males Females Persons	22-24	Includes those referred to employers and those who may have obtained employment without notifying the Commonwealth Employment Service. Includes recipients of unemployment benefit.	
<u>Job Vacancies Registered</u> For males For females Total	25-27		
<u>INTERNAL TRADE</u>			
<u>Retail Sales</u> Monthly retail sales - All items (excluding motor vehicles, parts, petrol, etc.) Quarterly retail sales Food and drink Clothing, hardware, etc. All other goods (excl. motor vehicles, parts, petrol, etc.) All items (excl. motor vehicles, parts, petrol, etc.) Motor vehicles, parts, petrol, etc.	28-33	The figures relate to retail sales of goods (as distinct from services, repairs, accommodation, entertainment, meals, etc.) by establishments which normally sell goods by retail to the general public from shops, rooms, kiosks and yards. Hotels, garages and service stations are included in respect of goods sold, but establishments such as clubs and guest houses are excluded. Goods sold from farms direct are also excluded.	Retail Sales of Goods - Provisional .. monthly Retail Sales of Goods - Preliminary .. quarterly Retail Sales of Goods .. quarterly

Series	Page	Explanatory Notes	Publications for further reference
<u>New Motor Vehicles Registered</u> Cars and station wagons Vehicles other than cars and station wagons Total	34-36	Registrations processed by the motor vehicle registration authorities in the States and Territories during the month. In Western Australia, registrations effected each month in areas outside the Perth Statistical Division (or the metropolitan traffic area for months prior to January 1967) are included in the figures for the following month. The figures include new Commonwealth-owned vehicles other than those belonging to the defence services.	Motor Vehicle Registrations .. monthly Registrations of New Motor Vehicles - Preliminary .. monthly
<u>BUILDING, ETC.</u>  New houses and flats approved - Number Total buildings approved - Value	37-38	Building permits issued by local government authorities and contracts let, work commenced and day labour projects authorised by government authorities. Number of houses and flats relate to individual living units. Value of total buildings approved includes all alterations and additions.	Building Approvals .. monthly
New houses and flats commenced - Number  Other new buildings commenced - Value  Total new buildings commenced - Value	39-41	Compiled from returns obtained from building contractors engaged in the erection of new buildings, owner builders and government authorities. Number of houses and flats relate to individual living units. Values exclude the value of land and represent the estimated value of buildings on completion.	Number of New Houses and Flats - Preliminary .. quarterly  Building statistics .. quarterly

Series	Page	Explanatory Notes	Publications for further reference
<u>Capital Expenditure by Private Businesses</u> New buildings and structures Other new capital equipment Total new capital expenditure	42-44	Statistics are from returns obtained from private businesses subject to pay-roll tax (other than rural, professional, gas and electricity), from government banks and airlines, and from other businesses not subject to pay-roll tax undertaking projects of more than \$500,000 in any half year.	Capital Expenditure by Private Businesses in Australia .. quarterly
<u>FINANCE</u>			
Savings bank deposits	45	Particulars for the Commonwealth Savings Bank, The State Savings Bank of Victoria, The Savings Bank of South Australia, The Rural and Industries Bank of Western Australia and the Hobart Savings Bank relate to the end of the month, those for the Launceston Bank for Savings to the last Monday in the month, and those for the other savings banks to the last Wednesday in the month.	Savings Bank Statistics .. monthly Savings Bank Statistics - Preliminary .. monthly
Major Trading Banks - Total deposits Major Trading Banks - Loans, advances, etc.	46-47	Major Trading Banks comprise the Commonwealth Trading Bank, Australia and New Zealand Bank Ltd, The Bank of Adelaide, Bank of New South Wales, The Commercial Bank of Australia Ltd, The Commercial Banking Company of Sydney Ltd, The English, Scottish and Australian Bank Ltd, The National Bank of Australasia Ltd.	Banking Statistics .. monthly Banking Statistics - Major Trading Banks - Preliminary .. monthly
Instalment credit for retail sales : Non-retail finance businesses - Balances outstanding	48	Instalment credit schemes covered include hire purchase, time payment, budget account and personal loan schemes conducted by finance businesses which are not themselves retailers.	Instalment Credit for Retail Sales .. quarterly Instalment Credit for Retail Sales - Preliminary and Provisional .. monthly



APPENDIX BPROGRAM OPTIONS EMPLOYED

The seasonally adjusted series given in this bulletin have been calculated by means of computer programs of the Census Method II, X-11 Variant (for monthly series) and the X-11Q Variant (for quarterly series). As described in paragraphs 59-62 of the "Introductory Notes", the manner in which these programs have been employed for each series depends on the selection made from among alternative optional procedures allowed for in the programs. The selection of program options has been guided by the evidence of special analyses made for each individual series.

Users should particularly note whether use has been made of trading-day adjustment and of prior adjustment for the effects of moveable holidays, namely Easter and Australia Day, since their application can materially affect the results obtained and the interpretation to be placed on them. Adjustments for trading-day effects and the effects of moveable Easter and Australia Day holidays (see paragraphs 23 and 47 of the Introductory Notes) have been applied to series where special analyses made beforehand have shown that variations, arising from these effects, in the number of trading or working days in the month have significantly affected the series. The only series to which trading-day adjustment has not been applied, apart from "stock" series such as employment and bank deposits, are quarterly building commencements, quarterly capital expenditure and quarterly retail sales of motor vehicles, parts, petrol, etc. For some of the series subject to trading-day adjustment, however, the results of analyses have not warranted further adjustment for Easter or Australia Day effects, e.g. milk production, retail sales and building commencements.

In seasonally adjusting the series listed below by means of the X-11 and X-11Q programs, certain program options were invariably used. These options are not referred to in the table below. Details of these options are:

- (1) Multiplicative adjustment is used in all cases.
- (2) Trading-day adjustments, where applied to monthly series, have been based upon specified prior weights derived from special analyses made beforehand and applied to the entire series.
- (3) Prior adjustment has been used only for purposes referred to in the table.
- (4) The routine for adjusting the trend for the effect of severe industrial disputes has not been used for any series.

Moving averages for trend in monthly series are options specified in accordance with moving averages selected by the X-11 program in analyses made beforehand. Moving averages for monthly seasonal factors are standard (3x5-term) except where alternative options are specified. The X-11Q program has only standard program-selected moving averages for trend and seasonal factors.

The application of other X-11 and X-11Q program options for each series included in this bulletin is as set out in the following table.

TABLE 7  
PROGRAM OPTIONS EMPLOYED

For terminology refer to paragraphs 59-62 of the "Introductory Notes"

Series	Page No.	Moving averages used		Limits for graduated treatment of extremes	Adjustment made for			
		Trend	Seasonal factors		Trading-day variation	Eastern	Aust-ralia Day	Other influences
<u>PRODUCTION</u>								
Electricity	1	9-term	3x5-term*	1.5 & 2.5*	yes(a)	yes	yes	no
Gas	2	13-term	3x5-term*	1.5 & 2.5*	yes(a)	yes	yes	no
Cement	3	13-term	3x5-term*	1.5 & 2.5*	yes(a)	no	no	no
Electric motors under 1 h.p.	4	13-term	3x5-term*	1.5 & 2.5*	yes(a)	yes	yes	yes(b)
Cotton woven cloth	5	13-term	3x5-term*	1.5 & 2.5*	yes(a)	yes	yes	yes(b)
Woollen and worsted woven cloth	6	13-term	3x5-term*	1.5 & 2.5*	yes(a)	yes	yes	yes(b)
Boots and shoes	7	13-term	3x5-term*	1.5 & 2.5*	yes(a)	yes	yes	yes(b)
Meat	8	13-term	3x5-term*	1.5 & 2.5*	yes(a)	yes	yes	no
Whole milk	9	13-term	3x5-term*	1.5 & 2.5*	yes(a)	no	no	no
<u>OVERSEAS TRADE</u>								
Imports	10	13-term	3x9-term	1.5 & 2.5*	yes(a)	yes	no	no
Exports	11	13-term	3x9-term	1.5 & 2.5*	yes(a)	yes	no	no
<u>EMPLOYMENT</u>								
<u>Wage and Salary Earners in Civilian Employment</u>								
Males	12	9-term	3x5-term*	1.5 & 2.5*	no	no	no	no
Females	13	9-term	3x5-term*	1.5 & 2.5*	no	no	no	no
Persons	14	9-term	3x5-term*	1.5 & 2.5*	no	no	no	no
Private - Persons	15	9-term	3x5-term*	1.5 & 2.5*	no	no	no	no
Government - Persons	16	9-term	3x5-term*	1.5 & 2.5*	no	no	no	no
Manufacturing - Persons	17	9-term	3x5-term*	1.5 & 2.5*	no	no	no	no
Commerce - Persons	18	9-term	3x5-term*	1.5 & 2.5*	no	no	no	no
<u>Number Receiving Unemployment Benefit</u>								
Males	19	9-term	3x5-term*	1.8 & 2.8	no	no	no	no
Females	20	9-term	3x5-term*	1.8 & 2.8	no	no	no	no
Persons	21	9-term	3x5-term*	1.8 & 2.8	no	no	no	no
<u>Number Registered for Employment</u>								
Males	22	9-term	3x5-term*	1.8 & 2.8	no	no	no	no
Females	23	9-term	3x5-term*	1.8 & 2.8	no	no	no	no
Persons	24	9-term	3x5-term*	1.8 & 2.8	no	no	no	no

Series	Page No.	Moving averages used		Limits for graduated treatment of extremes	Adjustment made for			
		Trend	Seasonal factors		Trading-day variation	Easter	Australia Day	Other influences
<u>Job Vacancies</u>								
<u>Registered</u>								
For males	25	9-term	3x5-term*	1.8 & 2.8	no	no	no	no
For females	26	9-term	3x5-term*	1.8 & 2.8	no	no	no	no
Total	27	9-term	3x5-term*	1.8 & 2.8	no	no	no	no
<u>INTERNAL TRADE</u>								
<u>Retail Sales</u>								
Monthly retail sales -								
All items (excluding motor vehicles, parts, petrol, etc.)	28	13-term	3x5-term*	1.5 & 2.5*	yes(a)	no	no	no
Quarterly retail sales -								
Food and drink	29	5-term*	3x5-term*	1.5 & 2.5*	yes(a)	no	no	no
Clothing, hardware, electrical, etc.	30	5-term*	3x5-term*	1.5 & 2.5*	yes(a)	no	no	no
All other goods (excl. motor vehicles, parts, petrol, etc.)	31	5-term*	3x5-term*	1.5 & 2.5*	yes(a)	no	no	no
All items (excluding motor vehicles, parts, petrol, etc.)	32	5-term*	3x5-term*	1.5 & 2.5*	yes(a)	no	no	no
Motor vehicles, parts, petrol, etc.	33	5-term*	3x5-term*	1.5 & 2.5*	no	no	no	no
<u>New Motor Vehicles</u>								
<u>Registered</u>								
Cars and station wagons	34	13-term	3x9-term	1.5 & 2.5*	yes(a)	yes	yes	no
Vehicles other than cars and station wagons	35	13-term	3x9-term	1.5 & 2.5*	yes(a)	yes	yes	no
Total	36	13-term	3x9-term	1.5 & 2.5*	yes(a)	yes	yes	no
<u>BUILDING, ETC.</u>								
New houses and flats approved - Number	37	13-term	3x9-term	1.5 & 2.5*	yes(a)	yes	yes	no
Total buildings approved - Value	38	13-term	3x9-term	1.5 & 2.5*	yes(a)	yes	yes	no
New houses and flats commenced - Number	39	5-term*	3x5-term*	1.5 & 2.5*	no	no	no	no
Other new buildings commenced - Value	40	5-term*	3x5-term*	1.5 & 2.5*	no	no	no	no
Total new buildings commenced - Value	41	5-term*	3x5-term*	1.5 & 2.5*	no	no	no	no



Series	Page No.	Moving averages used		Limits for graduated treatment of extremes	Adjustment made for			
		Trend	Seasonal factors		Trading-day variation	East	Australia Day	Other influences
<u>Capital Expenditure by Private Businesses</u>								
New buildings and structures	42	5-term*	3x5-term*	1.5 & 2.5*	no	no	no	no
Other new capital equipment	43	5-term*	3x5-term*	1.5 & 2.5*	no	no	no	no
Total new capital expenditure	44	5-term*	3x5-term*	1.5 & 2.5*	no	no	no	no
<u>FINANCE</u>								
Saving bank deposits	45	9-term*	3x5-term*	1.5 & 2.5*	no	no	no	no
Major Trading Banks - Deposits	46	9-term*	3x5-term*	1.5 & 2.5*	no	no	no	no
Major Trading Banks - Loans, advances, etc.	47	9-term*	3x5-term*	1.5 & 2.5*	no	no	no	no
Instalment credit for retail sales:								
Non-retail finance businesses - Balances outstanding	48	9-term*	3x5-term*	1.5 & 2.5*	no	no	no	no

(a) Allowance for length of month or quarter is combined with trading-day factors.

(b) Allowance has been made for an apparent abrupt change in seasonality (affecting mainly January) between December 1963 and January 1964.

\* These are X-11 program standard procedures which are employed unless an alternative is specified. The X-11Q program has only standard program-selected moving averages for trend and seasonal factors.

## APPENDIX C

MEASURES OF VARIABILITY

The following table shows, for series included in this bulletin, selected measures of variability of the original and seasonally adjusted series, and of component series as computed in the course of seasonal adjustment, i.e. the trend, seasonal and irregular components. A corresponding measure of the variability of trading-day adjustment factors, where applicable, is also shown.

Where prior adjustments have been made (for the influence of Easter, Australia Day, or an apparent abrupt change in seasonality) their effect is excluded from the measures of variability given below for trend, irregular, seasonal factors and trading-day adjustments.

In some instances these figures are derived from analyses which do not include the latest available data.

TABLE 8

Series	Page No.	Average percentage change without regard to sign:						
		from month to month* in the						From year to year in the seasonal factors
		Original series	Seasonally adjusted series	Trend series	Irregular series	Seasonal factors	Trading-day adjustment	
<u>PRODUCTION</u>								
Electricity (a)	1	4.85	1.12	0.72	0.77	4.09	4.03	0.19
Gas (a)	2	7.83	1.64	0.35	1.53	7.31	3.83	0.45
Cement	3	8.03	3.45	0.80	3.23	6.09	3.90	0.32
Electric motors under 1 h.p. (a)(b)	4	15.08	5.28	2.09	4.64	17.08	6.90	0.63
Cotton woven cloth (a)(b)	5	12.84	4.89	1.63	4.35	20.86	6.14	0.47
Woollen and worsted woven cloth (a)(b)	6	14.69	4.37	1.67	3.79	18.79	7.19	0.51
Boots and shoes (a)(b)	7	15.81	2.49	2.35	0.71	17.31	6.84	0.35
Meat (a)	8	6.45	3.08	1.15	2.74	5.39	5.55	0.53
Whole milk	9	16.10	2.68	1.00	2.31	16.06	3.98	0.67
<u>OVERSEAS TRADE</u>								
Imports (a)	10	10.94	6.86	1.63	6.64	4.61	5.69	0.31
Exports (a)	11	14.20	8.02	1.78	7.56	10.01	6.49	0.69

Series	Page No.	Average percentage change without regard to sign:						
		from month to month* in the						From year to year in the seasonal factors
		Original series	Seasonally adjusted series	Trend series	Irregular series	Seasonal factors	Trading-day adjustment	
<u>EMPLOYMENT</u>								
<u>Wage and Salary Earners in Civilian Employment</u>								
Males	12	0.26	0.24	0.20	0.10	0.14	0.00	0.02
Females	13	0.50	0.34	0.34	0.10	0.40	0.00	0.02
Persons	14	0.30	0.26	0.24	0.09	0.20	0.00	0.02
Private - Persons	15	0.36	0.30	0.26	0.11	0.25	0.00	0.02
Government - Persons	16	0.28	0.22	0.20	0.08	0.23	0.00	0.02
Manufacturing - Persons	17	0.46	0.31	0.27	0.15	0.32	0.00	0.04
Commerce - Persons	18	0.69	0.29	0.25	0.14	0.62	0.00	0.02
<u>Number Receiving Unemployment Benefit</u>								
Males	19	14.41	8.14	6.45	4.35	10.48	0.00	1.06
Females	20	7.28	4.46	4.05	1.94	5.55	0.00	1.08
Persons	21	11.65	6.84	5.54	3.37	8.64	0.00	0.92
<u>Number Registered for Employment</u>								
Males	22	12.06	5.47	4.33	3.02	10.16	0.00	1.22
Females	23	8.47	3.45	2.13	2.43	7.14	0.00	0.96
Persons	24	9.80	4.32	3.39	2.45	8.48	0.00	0.94
<u>Job Vacancies Registered</u>								
For males	25	9.64	4.88	3.96	2.82	8.91	0.00	1.10
For females	26	7.67	3.47	2.19	2.44	7.08	0.00	0.75
Total	27	8.58	4.05	3.30	2.27	7.85	0.00	0.93
<u>INTERNAL TRADE</u>								
<u>Retail Sales</u>								
Monthly retail sales	28	8.04	0.83	0.45	0.74	6.66	4.28	0.08
All items (excluding motor vehicles, parts, petrol, etc.)								
Quarterly retail sales	29	4.85	1.40	1.26	0.40	4.29	1.10	0.09
Food and drink								
Clothing, hardware, electrical, etc.	30	16.71	1.57	1.38	0.53	16.10	1.10	0.10
All other goods (excl. motor vehicles, parts, petrol, etc.)								
parts, petrol, etc.)	31	13.18	1.74	1.51	0.60	11.33	1.10	0.09
All items (excluding motor vehicles, parts, petrol, etc.)								
parts, petrol, etc.)	32	9.60	1.34	1.26	0.30	8.74	1.10	0.07
Motor vehicles, parts, petrol, etc.								
parts, petrol, etc.	33	6.64	3.36	2.88	1.48	5.52	0.00	0.24



Series	Page No.	Average percentage change without regard to sign:						
		from month to month* in the						From year to year in the seasonal factors
		Original series	Seasonally adjusted series	Trend series	Irregular series	Seasonal factors	Trading-day adjustment	
<u>New Motor Vehicles</u>								
<u>Registered</u>								
Cars and station wagons (a)	34	10.82	5.62	2.12	4.86	6.95	6.31	0.35
Vehicles other than cars and station wagons (a)	35	10.65	5.07	1.79	4.60	8.37	5.84	0.26
Total (a)	36	10.40	4.78	1.76	4.07	7.17	5.96	0.30
<u>BUILDING, ETC.</u>								
New houses and flats approved - Number (a)	37	12.07	6.17	1.37	5.88	8.60	6.63	0.37
Total buildings approved - Value (a)	38	12.80	7.49	1.48	7.21	9.90	6.63	0.36
New houses and flats commenced - Number	39	6.30	4.86	3.53	2.70	4.10	0.00	0.21
New buildings, other than houses and flats, commenced - Value	40	16.22	11.78	6.60	7.21	9.54	0.00	1.12
Total new buildings commenced - Value	41	9.12	6.56	4.70	3.40	5.66	0.00	0.49
<u>Capital Expenditure by Private Businesses</u>								
New buildings and structures	42	13.92	5.10	3.85	2.63	11.79	0.00	0.51
Other new capital equipment	43	13.25	5.68	3.78	3.75	13.44	0.00	0.47
Total new capital expenditure	44	12.53	3.86	3.15	2.24	11.93	0.00	0.41
<u>FINANCE</u>								
Savings bank deposits	45	0.77	0.71	0.70	0.16	0.45	0.00	0.03
Major Trading Banks - Total deposits	46	1.27	0.64	0.49	0.34	1.08	0.00	0.07
Major Trading Banks - Loans, advances, etc.	47	1.31	0.78	0.70	0.29	1.19	0.00	0.09
Instalment credit for retail sales: Non-retail finance businesses - Balances outstanding	48	1.10	1.00	0.98	0.18	0.52	0.00	0.05

\* From quarter to quarter in quarterly series.

- (a) In seasonally adjusting these series, allowance has been made by prior adjustment for Easter and/or Australia Day corrections.
- (b) In seasonally adjusting these series allowance has been made by prior adjustments for an apparent abrupt change in the seasonality affecting December and January from December 1963 onwards.